CCGS *W.E. Ricker* Gulf of Alaska Salmon Survey, June 9-11, 2003

D.W. Welch, J.F.T. Morris, M.E. Thiess, M. Trudel,
A.R. Ladouceur, T.B. Zubkowski, M.C. Jacobs,
P.M. Winchell, and H.R. MacLean

Fisheries and Oceans Canada
Science Branch, Pacific Region
Pacific Biological Station
Nanaimo, BC
V9T 6N7

2004

Canadian Data Report of Fisheries and Aquatic Sciences 1144

Fisheries and Oceans Canada | Pêches et Océans Canada

Canada

Canadian Data Report of
Fisheries and Aquatic Sciences

Data reports provide a medium for filing and archiving data compilations where little or no analysis is included. Such compilations commonly will have been prepared in support of other journal publications or reports. The subject matter of data reports reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries and aquatic sciences.

Data reports are not intended for general distribution and the contents must not be referred to in other publications without prior written authorization from the issuing establishment. The correct citation appears above the abstract of each report. Data reports are abstracted in *Aquatic Sciences and Fisheries Abstracts* and indexed in the Department's annual index to scientific and technical publications.

Numbers 1 - 25 in this series were issued as Fisheries and Marine Service Data Records. Numbers 26 - 160 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Data Reports. The current series name was introduced with the publication of report number 161.

Data reports are produced regionally but are numbered nationally. Requests for individual reports will be filled by the issuing establishment listed on the front cover and title page. Out-of-stock reports will be supplied for a fee by commercial agents.

Rapport statistique canadien des
sciences halieutiques et aquatiques

Les rapports statistiques servent à classer et à archiver les compilations de données pour lesquelles il y a peu ou point d'analyse. Ces compilations auront d'ordinaire été préparées à l'appui d'autres publications ou rapports. Les sujets des rapports statistiques reflètent la vaste gamme des intérêts et des politiques du ministère des Pêches et des Océans, c'est-à-dire les sciences halieutiques et aquatiques.

Les rapports statisiques ne sont pas destinés à une vaste distribution et leur contenu ne doit pas être mentionné dans une publication sans autorisation écrite préalable de l'établissement auteur. Le titre exact paraît au-dessus du résumé de chaque rapport. Les rapports statisiques sont résumés dans la revue *Résumés des sciences aquatiques et halieutiques*, et ils sont classés dans l'index annuel des publications scientifiques et techniques du Ministère.

Les numéros 1 à 25 de cette série ont été publiés à titre de relevés statistiques, Services des pêches et de la mer. Les numéros 26 à 160 ont été publiés à titre de rapports statistiques du Service des pêches et de la mer, ministère des Pêches et de l'Environnement. Le nom actuel de la série a été établi lors de la parution du numéro 161.

Les rapports statistiques sont produits à l'échelon régional, mais numérotés à l'échelon national. Les demandes de rapports seront satisfaites par l'établissement auteur dont le nom figure sur la couverture et la page du titre. Les rapports épuisés seront fournis contre rétribution par des agents commerciaux.

104-05812/

Canadian Data Report of
Fisheries and Aquatic Sciences 1144

2004

CCGS W. E. RICKER GULF OF ALASKA SALMON SURVEY, JUNE 9-11, 2003

by

D. W. Welch, J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur
T. B. Zubkowski, M. C. Jacobs, P. M. Winchell, and H. R. MacLean

Fisheries and Oceans Canada
Science Branch, Pacific Region
Pacific Biological Station
Nanaimo, BC V9T 6N7

© Her Majesty the Queen in Right of Canada, 2004
Cat. No. Fs97-13/1144E ISSN 0706-6465

Correct citation for this publication:

Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, T. B. Zubkowski, M. C. Jacobs, P. M. Winchell, and H. R. MacLean. 2004. *CCGS W. E. Ricker* Gulf of Alaska salmon survey, June 9-11, 2003. Data Rep. Fish. Aquat. Sci. 1144: 54 p.

LIST OF TABLES

Table 1. Tow positions and catch summaries of Pacific salmon for the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003..... 9

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003. 10

Table 3. Physical oceanographic data collected on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003..... 31

Table 4. Zooplankton data from bongo tows collected on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003. 33

LIST OF FIGURES

Figure 1. Fishing stations on the CCGS W. E. Ricker survey off Vancouver Island from June 9-11, 2003 35

Figure 2. Oceanographic stations on the CCGS W. E. Ricker survey to the Gulf of Alaska from June 9-11, 2003. 36

Figure 3. Plankton stations on the CCGS W. E. Ricker survey to the Gulf of Alaska from June 9-11, 2003. 37

Figure 4. Distribution of juvenile (age 0.0) pink salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+). 38

Figure 5. Distribution of adult (age 0.1+) pink salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+). 39

Figure 6. Distribution of juvenile (age 0.0+) chum salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+). 40

Figure 7. Distribution of adult chum salmon salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+). 41

Figure 8. Distribution of juvenile (age X.0+) sockeye salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+). 42

Figure 9. Distribution of adult sockeye salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 43

Figure 10. Distribution of juvenile (age X.0+) coho salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+). 44

Figure 11. Distribution of adult coho (age X.1+) salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+). 45

Figure 12. Distribution of catches of chinook salmon less than 100mm catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 46

Figure 13. Distribution of catches of chinook salmon from 100 to 199mm catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 47

Figure 14. Distribution of catches of chinook salmon from 200 to 299mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 48

Figure 15. Distribution of catches of chinook salmon from 300 to 349mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 49

Figure 16. Distribution of catches of chinook salmon from 350 to 399mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 50

Figure 17. Distribution of catches of chinook salmon from 400 to 499mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 51

Figure 18. Distribution of catches of chinook salmon greater than or equal to 500mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 52

Figure 19. Distribution of catches of chinook salmon from all size classes. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+)..... 53

Figure 20. Size distribution (fork length; mm) of Pacific salmon caught on the CCGS W. E. Ricker survey to the Gulf of Alaska from June 9-11, 2003..... 54

ABSTRACT

Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, T. B. Zubkowski, M. C. Jacobs, P. M. Winchell, and H. R. MacLean. 2004. *CCGS W. E. Ricker* Gulf of Alaska salmon survey, June 9-11, 2003. Data Rep. Fish. Aquat. Sci. 1144: 54 p.

The Highseas Salmon program of Fisheries and Oceans Canada conducted a survey of Pacific salmon in the Gulf of Alaska during June 9-11, 2003. The objectives of the surveys were to (1) evaluate the distribution and ecology of juvenile Pacific salmon (*Oncorhynchus spp.*) during their first year in the ocean, (2) describe the ambient oceanographic conditions, and (3) quantify the biomass of zooplankton, an important prey for Pacific salmon at sea. Our typical Highseas Salmon survey covers an area of coast line that spans from Vancouver Island to Southeast Alaska. Unfortunately, oceanographic, fish and zooplankton sampling was limited to stations off the west coast of Vancouver Island because the ship broke down.

A total of 1237 Pacific salmon were caught on the survey. Of these, 943 were juvenile pink (*O. gorbuscha*), chum (*O. keta*), coho salmon (*O. kisutch*), and sockeye (*O. nerka*) salmon in their first summer in the ocean and 71 were chinook salmon (*O. tshawytscha*) under 350mm in fork length.

Juvenile sockeye were caught on the continental shelf within the 1000 m isobath off the west coast of Vancouver Island, and juvenile chum, coho, and chinook under 350mm in fork length were caught both on the shelf and inside Kyuquot Sound. No juvenile pink were caught.

RESUME

Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, T. B. Zubkowski, M. C. Jacobs, P. M. Winchell, and H. R. MacLean. 2004. *CCGS W. E. Ricker* Gulf of Alaska salmon survey, June 9-11, 2003. Data Rep. Fish. Aquat. Sci. 1144: p 54.

Le programme canadien des Saumons en Haute Mer de Pêches de Océans Canada a réalisé une étude sur les saumons du Pacifique dans le Golfe de l'Alaska du 9 au 11 juin 2003. Les objectifs de cette étude était de (1) évaluer la distribution et l'écologie des saumons du Pacifique (*Oncorhynchus* spp.) juvéniles durant leur première année en mer, (2) décrire les conditions océanographiques ambiantes, et (3) quantifier la biomasse de zooplancton, une proie importante des saumons du Pacifique dans l'océan. Le programme canadien des Saumons en Haute Mer couvre habituellement une partie de la côte qui s'étend de l'Île de Vancouver au Sud-Est de l'Alaska. Malheureusement, nous n'avons pu mesuré les conditions océanographiques et échantillonné le zooplancton et les poissons que sur la côte ouest de l'Île de Vancouver à cause d'ennuis mécaniques du navire de recherche.

Un total de 1237 saumons du Pacifique ont été capturés durant cette étude. De ce nombre, 943 étaient des saumons juvéniles roses (*O. gotbuscha*), kétas (*O. keta*), cohos (*O kisutch*), et rouges (*O. nerka*) durant leur première année en mer et 71 saumons quinnats (*O. tshawytscha*) ayant une longueur à la fourche inférieure à 350 mm.

Les saumons juvéniles rouges ont été capturés sur le plateau continental en deçà de l'isobathe de 1000 m sur la côte ouest de l'Île de Vancouver, alors que les saumons kétas et cohos juvéniles et les saumons quinnats ayant une longueur à la fourche inférieure à 350 mm ont été capturés sur le plateau continental et dans le fjord de Kyuquot. Aucun saumon rose juvénile n'a été capturé.

INTRODUCTION

The Highseas Program of Fisheries and Oceans Canada has conducted annual Pacific salmon surveys in the Gulf of Alaska since 1995 [1-18]. The main objectives of these surveys were to collect information on (1) the distribution and ecology of Pacific salmon (*Oncorhynchus spp.)* during their ocean phase, (2) the ambient oceanographic conditions, and (3) the distribution and biomass of zooplankton.

This report documents the data collected for the survey completed during June 9-11, 2003. Highseas Salmon surveys typically comprise fish, oceanographic and zooplankton sampling from the west coast of Vancouver Island to Southeast Alaska. However, sampling on this survey was limited to the west coast of Vancouver Island because the ship broke down.

MATERIALS AND METHODS

General Survey Information

Figures 1, 2, and 3 show the fishing, oceanographic and zooplankton stations, respectively, completed by the *CCGS W.E. Ricker* on the during the June 9-11, 2003 survey. A total of 20 fishing stations, 21 oceanographic stations, and 21 zooplankton stations were completed. The first fishing tow on the survey at station EP01 on the Estevan Point transect off the west coast of Vancouver Island was declared void since the trawl hit the on the bottom as it was deployed, and this is why there was one less fishing station completed.

The survey conducted scientific operations off the west coast of Vancouver Island along a cross shelf transect off Estevan Point, along a cross shelf off Kyuquot Inlet, and inside Kyuquot Inlet.

Fishing Gear and Fishing Operations

The survey was conducted on the *C.C.G.S. W.E. Ricker*, a stern trawler 58 m in length which is powered by a 2,500 H.P. model AH 40 Akasaka diesel engine.

The *CCGS W.E. Ricker* towed a mid-water trawl, originally manufactured by Cantrawl Nets Ltd., Richmond, BC, and later modified to a model 240 trawl by the fishing crew. The trawl has a heavy-duty front end of hexagonal web made from 3/8 in. (9.5 mm) and 5/16 in. (7.9 mm) Tenex rope, and a tapered body made-up of 64 in. (163 cm), 32 in. (81.3 cm), 16 in. (40.6 cm), 8 in. (20.3 cm) and 4 in. (10.2 cm) polypropylene sections, an intermediate section of 3 in. (7.6 cm) polypropylene, and a codend of 1.5 in. (3.8 cm) knotted nylon lined with 0.25 in. mesh (64 mm). The trawl has three 40 m bridles of 5/8 in. (1.6 cm) wire rope per side that are attached with a single hook-up to 5 m Jet doors. Typically, 100-150 m of 1.25 in. (3.2 cm) warp was paid out to tow the trawl at the surface.

The *CCGS W.E. Ricker* was able to tow the trawl at the surface at 5 knots (2.6 m s^{-1}) in good sea conditions, and this typically achieved a mouth opening of approximately 28 m wide by 16 m deep as measured acoustically by a Scanmar trawl eye mounted on the headrope. In rough weather, the trawl was towed at headrope depths down to 15 m.

Oceanographic Sampling

At oceanographic stations, the scientific crew (1) conducted CTD (conductivity-temperature-depth) casts, (2) collected surface seawater samples with a Niskin bottle for nitrate, phosphate, silicate, and salinity, and (3) filtered surface seawater on GF/F glass fibre filter disks for chlorophyll *a*.

Nitrate, phosphate, and silicate samples were collected in acid-washed glass test tubes, and the glass fiber disks were folded and placed in polypropylene scintillation vials. All these samples were stored frozen.

CTD casts were conducted to 250 m or within 5 m of the bottom with a Seabird SBE 911+ probe. Several calibration samples from selected CTD casts were collected over the course of the survey with Niskin bottles at depths where the salinities were stable.

Zooplankton Sampling

Vertical bongo tows to approximately 150 m or within 10 m of the bottom were conducted with two 57 cm diameter, 253 μm Nitex nets. One of the nets was equipped with a flowmeter.

Zooplankton collected from the net with the flowmeter were preserved in 10% formalin and sent to the zooplankton laboratory at the Institute of Ocean Sciences, Fisheries and Oceans Canada (Sidney, BC) for species classification and enumeration. Zooplankton taken from the net without flowmeter were sorted into four size fractions by successively sieving through 8.0, 1.7, 1.0, and 0.25 mm screens. Each size fraction was weighed wet, dried at 60°C for 48 hours, re-weighed, and stored in plastic bags for future stable isotope, bomb calorimetry, and proximate analyses.

RESULTS

Salmon Catch Data

Table 1 reports information on trawl tows and a summary of Pacific salmon catches for this survey. Tow information includes: station ID, transect name, sampling region, date and time, start latitude (°N) and longitude (°W), heading (°T; degrees true), and bottom depth (m). Station ID numbers consisted of the Pacific Biological Station

cruise designation ("HS200313", where HS stands for High Seas), followed by a tow number (e.g., "HS200313-EP02" for a tow at station EP02 along the Estevan Point transect). The station ID number serves as the primary key in the High Seas salmon database that links fishing tow information with the oceanographic and zooplankton tables.

For each tow, catch totals are provided for all chinook salmon (*O. tshawytscha*) ("CK") that includes all ages and size classes, and separately for juveniles and adults of chum salmon (*O. keta*) ("CM"), coho salmon (*O. kisutch*) ("CO"), pink salmon (*O. gorbuscha*) ("PK"), and sockeye salmon (*O. nerka*) ("SE"). In this report, "juveniles" are defined as fish in their first spring in the ocean (age X.0+), while "adults" include all older age groups (age X.1+ or older). Age separation was determined based on examination of size distributions (fork length) which showed non-overlapping size modes for chum, coho, pink and sockeye salmon. Chinook salmon were not divided into juveniles and adults based on size since there is considerable overlap among size modes that represent the multiple age groups

The abbreviations for the regions in Tables 1, 3, and 4 are:

VI	west coast Vancouver Island
IVI	inside the inlets on the west coast of Vancouver Island

Biological Data

Table 2 reports the detailed biological data collected from each Pacific salmon caught during the survey. Individual salmon were assigned a fish number which consisted of the cruise identifier (e.g., "HS200313"), followed hierarchically by tow number, species code and sample number. For example, "HS200313-EP02-124-001" refers to tow number 2 on the Estevan Point transect, species code "124" for chinook salmon, and the sample number "1" (within tow and species). We used the following codes from Fisheries and Oceans' Salmon Stock Assessment database: 108, pink salmon; 112, chum salmon; 115, coho salmon; 118, sockeye salmon; and 124, chinook salmon.

Biological data collected for each salmon includes (when available): species common name, fork length (mm), whole body weight (g wet), sex, stomach content weight (g wet), % water (based on the ratio of dry to wet whole body weight), coded wire tag number (CWT; if present), pit tag number (if present), and observed fin clip (if present).

Catch Distributions

No juvenile pink (age 0.0) in their first summer at sea were caught off the west coast of Vancouver Island on this June 9-11, 2003 cruise (Figure 4).

Juvenile chum (age 0.0) were caught within the range of 1-1000 fish per tow on the shelf and in the range of 1-100 per tow inside Kyuquot Sound (Figure 6).

Juvenile sockeye (age X.0) were caught within the range of 1-1000 fish per tow on the shelf on the Estevan Point and Kyuquot transects (Figure 8).

Juvenile coho (age X.0) were caught on the shelf within the range of 1-10 fish per tow and in the range of 1-59 per tow inside Kyuquot Sound (Figure 10).

Adult pink (age 0.1) within the range of 1-10 fish per tow were caught both offshore and on the shelf along the Estevan Point transect (Figure 5).

Adult chum were caught within the range of 1-100 fish per tow both offshore and along the shelf on the Estevan Point transect, and along the shelf on the Kyuquot transect (Figure 7).

No adult sockeye were caught (Figure 9).

Adult coho were caught within the range of 1-100 per tow both offshore and on the shelf on the Estevan Point transect, and along the shelf on the Kyuquot transect. One adult coho was caught within Kyuquot Sound (Figure 11).

Chinook were caught within the range of 1 to 100 fish per tow both offshore and on the shelf on the Estevan Point transect, along the shelf on the Kyuquot transect, and within Kyuquot Sound (Figure 19).

Juvenile chinook from 100 to 199 mm in fork length were caught within the range of 1-10 fish per tow on the shelf along the Estevan Point and Kyuquot transects (Figure 13).

Juvenile chinook from 200 to 299 mm in fork length were caught within the range of 1-10 fish per tow on the shelf along the Estevan Point and Kyuquot transects, and within Kyuquot Sound (Figure 14).

Juvenile chinook from 300 to 349 mm in fork length were caught within the range of 1-10 fish per tow on the shelf along the Estevan Point and Kyuquot transects, and within Kyuquot Sound (Figure 15).

Chinook from 350 to 399 mm in fork length were caught within the range of 1-10 fish per tow on the shelf along the Estevan Point and Kyuquot transects, and within Kyuquot Sound (Figure 16).

Chinook from 400 to 499 mm in fork length were caught within the range of 1 to 100 fish per tow both offshore and on the shelf on the Estevan Point transect, along the shelf on the Kyuquot transect, and within Kyuquot Sound (Figure 17).

Chinook greater than 500 mm in fork length were caught within the range of 1 to 10 fish per tow both offshore and on the shelf on the Estevan Point transect, and along the shelf on the Kyuquot transect (Figure 18).

Juvenile Salmon Sizes

Figure 20 shows the length frequencies for each species of salmon caught off the west coast of Vancouver Island.

Juvenile chum (age 0.0) averaged 115 mm in fork length, and ranged from 88 to 157 mm on the west coast of Vancouver Island. Juvenile sockeye 113 mm, and ranged from 92 to 149 mm. Juvenile coho averaged 177 mm, and ranged from 113 to 262 mm. No juvenile pink were caught.

Chinook represent a mixed age group population that ranged from 154 to 940 mm.

CWT Recoveries

Sixteen CWT chinook were recovered off the west coast of Vancouver Island. As yet, none of the CWT have been extracted for reading, and so no hatchery release information is available.

Oceanographic Data

Table 3 reports the physical oceanographic data collected during the survey, including the station ID number, transect, region, the date and time in UTC, the latitude (^{o}N) and longitude (^{o}W), sea surface temperature (SST; ^{o}C) and salinity (SSS; ppt) taken from the CTD files, sea surface salinities (ppt) determined from the sample bottles that were used to calibrate the CTD probe, nitrate, silicate and phosphate concentrations (μmol L^{-1}), and chlorophyll *a* and phaeophytin concentrations (μg L^{-1}).

The CTD files are available through the website of the Canadian Department of Fisheries and Oceans, Ocean Science and Productivity division (OSAP) at:

http://www-sci.pac.dfo-mpo.gc.ca/osap/data/default_e.htm

Zooplankton Data

Table 4 reports the zooplankton data by station collected by the Bongo tows, including the station ID number, transect, region, latitude (°N) and longitude (°W), bottom depth (m), the date and time, target depth (m), tow duration, wire angle (degrees), and volume of ocean water sampled in cubic meters that is calculated from the flow meter readings. Also shown are the dry weights (g) of zooplankton which were standardised to 1,000 cubic meters sampled for the 8.0, 1.7, 1.0, and 0.25 mm size factions as well as for the total sample.

REFERENCES

1) Welch, D. W., J. F. T. Morris, E. Demers, and H. R. Carlson. 2002. *F.V. Anita J.* Gulf of Alaska salmon survey, March 25 - April 9, 1995. Can. Data Rep. Fish. Aquat. Sci. 1097: 19 p.

2) Welch, D. W., J. F. T. Morris, E. Demers, and H. R. Carlson. 2002. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, October 2-20, 1995. Can. Data Rep. Fish. Aquat. Sci. 1098: 23 p.

3) Welch, D. W., J. F. T. Morris, E. Demers, and B. L. Wing. 2002. *F.V. Columbia* Gulf of Alaska salmon survey, October 7 - November 10, 1995. Can. Data Rep. Fish. Aquat. Sci. 1099: 112 p.

4) Welch D. W., J. F. T. Morris, E. Demers, and J.P. Eveson. 2002. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, October, 1996. Can. Data Rep. Fish. Aquat. Sci. 1100: 64 p.

5) Welch, D. W., J. F. T. Morris, and E. Demers. 2002. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, March - April, 1997. Can. Data Rep. Fish. Aquat. Sci. 1101: 19 p.

6) Welch, D. W., J. F. T. Morris, and E. Demers. 2002. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, November - December, 1997. Can. Data Rep. Fish. Aquat. Sci. 1102: 45 p.

7) Welch, D. W., J. F. T. Morris, A. R. Ladouceur, S. Tucker, and E. Demers. 2002. *CCGS W.E. Ricker* Gulf of Alaska salmon surveys, 1998. Can. Data Rep. Fish. Aquat. Sci. 1103: 188 p.

8) Welch, D. W., J. F. T. Morris, A. R. Ladouceur, S. Tucker, and E. Demers. 2002. *CCGS W.E. Ricker* Gulf of Alaska salmon surveys, 1999. Can. Data Rep. Fish. Aquat. Sci. 1104: 113p.

9) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, and D. J. Anderson. 2003. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, June 27 to July 6, 2000. Can. Data Rep. Fish. Aquat. Sci. 1125: 110 p.

10) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, M. C. Jacobs, T. B. Zubkowski, E. Demers, and J. E. Zamon. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, June 14-24, 2001. Can. Data Rep. Fish. Aquat. Sci. 1135: 86 p.

11) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, T. B. Zubkowski, H. R. MacLean, M. C. Jacobs, and P. M. Winchell. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, October 9 to November 5, 2001. Can. Data Rep. Fish. Aquat. Sci. 1136: 145 p.

12) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, M. C. Jacobs, T. B. Zubkowski, and H. R. MacLean. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, August 15-26, 2002. Can. Data Rep. Fish. Aquat. Sci. 1137: 121 p.

13) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur,T. B. Zubkowski, M. C. Jacobs, P.M. Winchell, and H. R. MacLean. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, October 17 to November 9, 2002. Can. Data Rep. Fish. Aquat. Sci. 1138: 122 p.

14) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, T. B. Zubkowski, M. C. Jacobs, P. M. Winchell, and H. R. MacLean. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, February 14-26, 2003. Can. Data Rep. Fish. Aquat. Sci. 1139: 65 p.

15) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, J. E. Zamon, T. B. Zubkowski, A. R. Ladouceur, M. C. Jacobs, M. Robert, and M. Wyeth. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, October 4-30, 2000. Can. Data Rep. Fish. Aquat. Sci. 1141: 205 p.

16) Welch, D. W., J. F. T. Morris, J. E. Zamon, M. E. Thiess, M. Trudel, A. R. Ladouceur, M. C. Jacobs, T. B. Zubkowski, E. Demers, and M. Robert. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, March 9-24, 2001. Can. Data Rep. Fish. Aquat. Sci. 1142: 67 p.

17) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, M. C. Jacobs, T. B. Zubkowski, P. M. Winchell, and H. R. MacLean. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, February 27 to March 17, 2002. Can. Data Rep. Fish. Aquat. Sci. 1143: 56 p.

18) Welch, D. W., J. F. T. Morris, M. E. Thiess, M. Trudel, A. R. Ladouceur, M. C. Jacobs, T. B. Zubkowski, and H. R. MacLean. 2004. *CCGS W.E. Ricker* Gulf of Alaska salmon survey, October 8-27, 2003. Can. Data Rep. Fish. Aquat. Sci. 1145: 116 p.

Table 1. Tow positions and catch summaries of Pacific salmon for the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Station ID	Station Name	Region	Date	Time	Latitude (°N)	Longitude (°W)	Heading (°T)	SOG (kts)	Bottom Depth (m)	CK all	CM Juv	CM ad.	CO Juv	CO Ad.	PK Juv	PK Ad.	SE Juv	SE Ad.
HS200313EP02	ESTEVAN PT	VI	09-Jun-03	11:39	49.309	126.632	235	5.19	94	6	0	0	0	2	0	0	0	0
HS200313EP03	ESTEVAN PT	VI	09-Jun-03	13:06	49.269	126.703	238	4.99	114	19	290	1	8	1	0	0	332	0
HS200313EP04	ESTEVAN PT	VI	09-Jun-03	14:33	49.235	126.776	239	5.19	122	8	68	2	1	4	0	0	27	0
HS200313EP05	ESTEVAN PT	VI	09-Jun-03	16:01	49.197	126.848	236	4.99	140	19	9	18	0	16	0	0	7	0
HS200313EP06	ESTEVAN PT	VI	09-Jun-03	17:32	49.165	126.935	249	4.78	220	25	0	12	1	19	0	1	1	0
HS200313EP07	ESTEVAN PT	VI	09-Jun-03	19:08	49.128	127.005	238	4.8	601	8	0	12	0	20	0	2	0	0
HS200313EP08	ESTEVAN PT	VI	10-Jun-03	07:50	49.031	127.194	252	5.13	1965	3	0	2	0	2	0	2	0	0
HS200313EP09	ESTEVAN PT	VI	10-Jun-03	10:13	48.892	127.451	255	5.15	2212	2	0	3	0	1	0	1	0	0
HS200313EP10	ESTEVAN PT	VI	10-Jun-03	12:34	48.761	127.705	255	5.08	2541	0	0	5	0	0	0	2	0	0
HS200313EP11	ESTEVAN PT	VI	10-Jun-03	15:02	48.625	127.980	259	5.09	2594	0	0	0	0	1	0	0	0	0
HS200313EP12	ESTEVAN PT	VI	10-Jun-03	17:29	48.485	128.224	260	4.69	2566	0	0	0	0	0	0	0	0	0
HS200313IVI01	KYUQUOT SD	IVI	11-Jun-03	07:33	50.076	127.253	2	5.77	212	2	0	0	11	0	0	0	0	0
HS200313IVI02	KYUQUOT SD	IVI	11-Jun-03	09:05	50.076	127.187	231	5.35	209	4	14	0	2	0	0	0	0	0
HS200313IVI03	KYUQUOT SD	IVI	11-Jun-03	10:43	50.003	127.194	244	4.97	152	2	7	0	59	1	0	0	0	0
HS200313IVI04	KYUQUOT SD	IVI	11-Jun-03	12:12	49.987	127.239	229	5.51	144	3	1	0	53	0	0	0	0	0
HS200313VI01	OFF KYUQUOT SD	VI	11-Jun-03	13:14	49.947	127.295	226	5.84	99	0	0	1	1	0	0	0	0	0
HS200313VI02	OFF KYUQUOT SD	VI	11-Jun-03	14:16	49.917	127.334	232	5.68	57	1	0	1	0	0	0	0	0	0
HS200313VI03	OFF KYUQUOT SD	VI	11-Jun-03	15:39	49.893	127.376	246	5.85	63	2	18	8	0	0	0	0	21	0
HS200313VI04	OFF KYUQUOT SD	VI	11-Jun-03	17:14	49.833	127.481	233	5.42	70	23	3	3	8	9	0	0	1	0
HS200313VI05	OFF KYUQUOT SD	VI	11-Jun-03	18:26	49.769	127.557	232	5.68	156	2	0	12	0	1	0	0	0	0
									Totals	129	410	80	144	77	0	8	389	0
														Overall total			1237	

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP02-124-001	CHINOOK	177	62					AD
HS200313-EP02-124-002	CHINOOK	196	84					AD
HS200313-EP02-124-003	CHINOOK	188	74				Y	AD
HS200313-EP02-124-004	CHINOOK	284	270					AD
HS200313-EP02-124-005	CHINOOK	399	858					
HS200313-EP02-124-006	CHINOOK	470		M				
HS200313-EP03-124-001	CHINOOK	177	71					
HS200313-EP03-124-002	CHINOOK	204	106					AD
HS200313-EP03-124-003	CHINOOK	177	67					
HS200313-EP03-124-004	CHINOOK	180	74				Y	AD
HS200313-EP03-124-005	CHINOOK	169	60					AD
HS200313-EP03-124-006	CHINOOK	163	58					AD
HS200313-EP03-124-007	CHINOOK	164	54					AD
HS200313-EP03-124-008	CHINOOK	177	64				Y	AD
HS200313-EP03-124-009	CHINOOK	215	122				Y	AD
HS200313-EP03-124-010	CHINOOK	197	187					AD
HS200313-EP03-124-011	CHINOOK	169	62					AD
HS200313-EP03-124-012	CHINOOK	172	68					AD
HS200313-EP03-124-013	CHINOOK	246	194					AD
HS200313-EP03-124-014	CHINOOK	322	429					AD
HS200313-EP03-124-015	CHINOOK	312	376					
HS200313-EP03-124-016	CHINOOK	780		M				
HS200313-EP03-124-017	CHINOOK	460		M				
HS200313-EP03-124-018	CHINOOK	438		F			Y	AD
HS200313-EP03-124-019	CHINOOK	548		M				
HS200313-EP04-124-001	CHINOOK	321	393					AD
HS200313-EP04-124-002	CHINOOK	289	325					
HS200313-EP04-124-003	CHINOOK	205	112					AD
HS200313-EP04-124-004	CHINOOK	311	396					
HS200313-EP04-124-005	CHINOOK	782		F				
HS200313-EP04-124-006	CHINOOK	850		F				
HS200313-EP04-124-007	CHINOOK	875		F				
HS200313-EP04-124-008	CHINOOK	770		F				
HS200313-EP05-124-001	CHINOOK	184	65					
HS200313-EP05-124-002	CHINOOK	207	109				Y	AD
HS200313-EP05-124-003	CHINOOK	164	50				Y	AD
HS200313-EP05-124-004	CHINOOK	351	577					
HS200313-EP05-124-005	CHINOOK	351	553					
HS200313-EP05-124-006	CHINOOK	328	492					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP05-124-007	CHINOOK	321	445					
HS200313-EP05-124-008	CHINOOK	318	413					
HS200313-EP05-124-009	CHINOOK	318	409					
HS200313-EP05-124-010	CHINOOK	331	464					
HS200313-EP05-124-011	CHINOOK	342	527				Y	AD
HS200313-EP05-124-012	CHINOOK	467		F			Y	AD
HS200313-EP05-124-013	CHINOOK	394		F				
HS200313-EP05-124-014	CHINOOK	445		M			Y	AD
HS200313-EP05-124-015	CHINOOK	406		M				
HS200313-EP05-124-016	CHINOOK	345		F			Y	AD
HS200313-EP05-124-017	CHINOOK	375		M				
HS200313-EP05-124-018	CHINOOK	370		F				
HS200313-EP05-124-019	CHINOOK	537		M				
HS200313-EP06-124-001	CHINOOK	208	115				Y	
HS200313-EP06-124-002	CHINOOK	195	104					AD
HS200313-EP06-124-003	CHINOOK	165	154					AD
HS200313-EP06-124-005	CHINOOK	305	371					
HS200313-EP06-124-006	CHINOOK	310	425					
HS200313-EP06-124-007	CHINOOK	316	387					
HS200313-EP06-124-008	CHINOOK	343	465					
HS200313-EP06-124-009	CHINOOK	370	620					
HS200313-EP06-124-010	CHINOOK	560		M				
HS200313-EP06-124-011	CHINOOK	772		M				
HS200313-EP06-124-012	CHINOOK	456		F				AD
HS200313-EP06-124-013	CHINOOK	445		F				AD
HS200313-EP06-124-014	CHINOOK	412		M				
HS200313-EP06-124-015	CHINOOK	432		M				
HS200313-EP06-124-016	CHINOOK	600		F				
HS200313-EP06-124-017	CHINOOK	657		F				
HS200313-EP06-124-018	CHINOOK	480		M				AD
HS200313-EP06-124-019	CHINOOK	448		F				AD
HS200313-EP06-124-020	CHINOOK	502		F				
HS200313-EP06-124-021	CHINOOK	490		F				AD
HS200313-EP06-124-022	CHINOOK	418		F				
HS200313-EP06-124-023	CHINOOK	452		M				
HS200313-EP06-124-024	CHINOOK	445		M				AD
HS200313-EP06-124-025	CHINOOK	470		M				
HS200313-EP06-124-026	CHINOOK	399		M				
HS200313-EP07-124-001	CHINOOK	541		F				

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP07-124-002	CHINOOK	470		F				AD
HS200313-EP07-124-003	CHINOOK	416		F				
HS200313-EP07-124-004	CHINOOK	450		M				AD
HS200313-EP07-124-005	CHINOOK	323		M				
HS200313-EP07-124-006	CHINOOK	344		M				
HS200313-EP07-124-007	CHINOOK	345		M				
HS200313-EP07-124-008	CHINOOK	830		F				
HS200313-EP08-124-001	CHINOOK	500		M				
HS200313-EP08-124-002	CHINOOK	438		M				
HS200313-EP08-124-003	CHINOOK	472		F				
HS200313-EP09-124-001	CHINOOK	508		F				AD
HS200313-EP09-124-002	CHINOOK	440		F				AD
HS200313-IVI01-124-001	CHINOOK	448	866					
HS200313-IVI02-124-001	CHINOOK	333	473					
HS200313-IVI02-124-002	CHINOOK	346	506					
HS200313-IVI03-124-001	CHINOOK	290	302					
HS200313-IVI03-124-003	CHINOOK	422	871					
HS200313-IVI03-124-004	CHINOOK	402	791					
HS200313-IVI04-124-001	CHINOOK	242	176					
HS200313-IVI04-124-002	CHINOOK	357	455					
HS200313-IVI04-124-003	CHINOOK	290	313					AD
HS200313-IVI04-124-004	CHINOOK	329	478					
HS200313-IVI04-124-005	CHINOOK	310	395				Y	AD
HS200313-VI02-124-001	CHINOOK	172	59					
HS200313-VI03-124-001	CHINOOK	182	75				Y	AD
HS200313-VI03-124-002	CHINOOK	179	65					AD
HS200313-VI04-124-001	CHINOOK	286	287					
HS200313-VI04-124-002	CHINOOK	319	397					AD
HS200313-VI04-124-003	CHINOOK	315	408					
HS200313-VI04-124-004	CHINOOK	296	335					
HS200313-VI04-124-005	CHINOOK	270	252					AD
HS200313-VI04-124-006	CHINOOK	318	415					
HS200313-VI04-124-007	CHINOOK	309	396					
HS200313-VI04-124-008	CHINOOK	340	557					
HS200313-VI04-124-009	CHINOOK	295	355					AD
HS200313-VI04-124-010	CHINOOK	378	736					
HS200313-VI04-124-011	CHINOOK	334	497					
HS200313-VI04-124-012	CHINOOK	382	720					
HS200313-VI04-124-013	CHINOOK	291	314					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-VI04-124-014	CHINOOK	334	478					
HS200313-VI04-124-015	CHINOOK	249	144					
HS200313-VI04-124-016	CHINOOK	163	82					AD
HS200313-VI04-124-017	CHINOOK	203	91					AD
HS200313-VI04-124-018	CHINOOK	160	70					AD
HS200313-VI04-124-019	CHINOOK	174	67				Y	AD
HS200313-VI04-124-020	CHINOOK	154	41					AD
HS200313-VI04-124-021	CHINOOK	423	960	F			Y	AD
HS200313-VI04-124-022	CHINOOK	620	8300	F				
HS200313-VI04-124-023	CHINOOK	940	11900	F				
HS200313-VI05-124-001	CHINOOK	455	1094	M				
HS200313-VI05-124-002	CHINOOK	478	1432	M				
HS200313-EP03-112-001	CHUM	137	22					
HS200313-EP03-112-002	CHUM	110	12					
HS200313-EP03-112-003	CHUM	110	10					
HS200313-EP03-112-004	CHUM	115	15					
HS200313-EP03-112-005	CHUM	133	23					
HS200313-EP03-112-006	CHUM	157	39					
HS200313-EP03-112-007	CHUM	153	34					
HS200313-EP03-112-008	CHUM	139	27					
HS200313-EP03-112-009	CHUM	114	14					
HS200313-EP03-112-010	CHUM	139	24					
HS200313-EP03-112-011	CHUM	106	11					
HS200313-EP03-112-012	CHUM	95	8					
HS200313-EP03-112-013	CHUM	116	15					
HS200313-EP03-112-014	CHUM	126	18					
HS200313-EP03-112-015	CHUM	115	18					
HS200313-EP03-112-016	CHUM	605		M				
HS200313-EP03-112-017	CHUM	127						
HS200313-EP03-112-018	CHUM	113						
HS200313-EP03-112-019	CHUM	108						
HS200313-EP03-112-020	CHUM	123						
HS200313-EP03-112-021	CHUM	116						
HS200313-EP03-112-022	CHUM	105						
HS200313-EP03-112-023	CHUM	119						
HS200313-EP03-112-024	CHUM	113						
HS200313-EP03-112-025	CHUM	128						
HS200313-EP03-112-026	CHUM	107						
HS200313-EP03-112-027	CHUM	110						

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP03-112-028	CHUM	109						
HS200313-EP03-112-029	CHUM	104						
HS200313-EP03-112-030	CHUM	101						
HS200313-EP03-112-031	CHUM	108						
HS200313-EP03-112-032	CHUM	108						
HS200313-EP03-112-033	CHUM	105						
HS200313-EP03-112-034	CHUM	109						
HS200313-EP03-112-035	CHUM	88						
HS200313-EP03-112-036	CHUM	108						
HS200313-EP03-112-037	CHUM	104						
HS200313-EP03-112-038	CHUM	110						
HS200313-EP03-112-039	CHUM	112						
HS200313-EP03-112-040	CHUM	112						
HS200313-EP03-112-041	CHUM	105						
HS200313-EP03-112-042	CHUM	113						
HS200313-EP03-112-043	CHUM	102						
HS200313-EP03-112-044	CHUM	109						
HS200313-EP03-112-045	CHUM	114						
HS200313-EP03-112-046	CHUM	137						
HS200313-EP03-112-047	CHUM	108						
HS200313-EP03-112-048	CHUM	113						
HS200313-EP03-112-049	CHUM	108						
HS200313-EP03-112-050	CHUM	127						
HS200313-EP03-112-051	CHUM	123						
HS200313-EP03-112-052	CHUM	96						
HS200313-EP03-112-053	CHUM	102						
HS200313-EP03-112-054	CHUM	104						
HS200313-EP03-112-055	CHUM	105						
HS200313-EP03-112-056	CHUM	105						
HS200313-EP03-112-057	CHUM	103						
HS200313-EP03-112-058	CHUM	119						
HS200313-EP03-112-059	CHUM	145						
HS200313-EP03-112-060	CHUM	109						
HS200313-EP03-112-061	CHUM	102						
HS200313-EP03-112-062	CHUM	112						
HS200313-EP03-112-063	CHUM	116						
HS200313-EP03-112-064	CHUM	113						
HS200313-EP03-112-065	CHUM	111						
HS200313-EP03-112-066	CHUM	110						

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP03-112-067	CHUM	116						
HS200313-EP03-112-068	CHUM	113						
HS200313-EP03-112-069	CHUM	105						
HS200313-EP03-112-070	CHUM	93						
HS200313-EP03-112-071	CHUM	95						
HS200313-EP03-112-072	CHUM	100						
HS200313-EP03-112-073	CHUM	112						
HS200313-EP03-112-074	CHUM	120						
HS200313-EP03-112-075	CHUM	106						
HS200313-EP03-112-076	CHUM	102						
HS200313-EP03-112-077	CHUM	108						
HS200313-EP03-112-078	CHUM	109						
HS200313-EP03-112-079	CHUM	108						
HS200313-EP03-112-080	CHUM	107						
HS200313-EP03-112-081	CHUM	108						
HS200313-EP03-112-082	CHUM	114						
HS200313-EP03-112-083	CHUM	110						
HS200313-EP03-112-084	CHUM	123						
HS200313-EP03-112-085	CHUM	111						
HS200313-EP03-112-086	CHUM	105						
HS200313-EP03-112-087	CHUM	136						
HS200313-EP03-112-088	CHUM	108						
HS200313-EP03-112-089	CHUM	105						
HS200313-EP03-112-090	CHUM	108						
HS200313-EP03-112-091	CHUM	104						
HS200313-EP03-112-092	CHUM	107						
HS200313-EP03-112-093	CHUM	116						
HS200313-EP03-112-094	CHUM	103						
HS200313-EP03-112-095	CHUM	100						
HS200313-EP03-112-096	CHUM	107						
HS200313-EP03-112-097	CHUM	104						
HS200313-EP03-112-098	CHUM	109						
HS200313-EP03-112-099	CHUM	108						
HS200313-EP03-112-100	CHUM	98						
HS200313-EP04-112-001	CHUM	114	16					
HS200313-EP04-112-002	CHUM	120	18					
HS200313-EP04-112-003	CHUM	106	13					
HS200313-EP04-112-004	CHUM	110	13					
HS200313-EP04-112-005	CHUM	109	13					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP04-112-006	CHUM	102	11					
HS200313-EP04-112-007	CHUM	135	24					
HS200313-EP04-112-008	CHUM	104	11					
HS200313-EP04-112-009	CHUM	111	14					
HS200313-EP04-112-010	CHUM	123	20					
HS200313-EP04-112-011	CHUM	126	20					
HS200313-EP04-112-012	CHUM	112	14					
HS200313-EP04-112-013	CHUM	110	14					
HS200313-EP04-112-014	CHUM	104	12					
HS200313-EP04-112-015	CHUM	119	17					
HS200313-EP04-112-016	CHUM	122						
HS200313-EP04-112-017	CHUM	120						
HS200313-EP04-112-018	CHUM	115						
HS200313-EP04-112-019	CHUM	115						
HS200313-EP04-112-020	CHUM	118						
HS200313-EP04-112-021	CHUM	113						
HS200313-EP04-112-022	CHUM	115						
HS200313-EP04-112-023	CHUM	119						
HS200313-EP04-112-024	CHUM	116						
HS200313-EP04-112-025	CHUM	117						
HS200313-EP04-112-026	CHUM	108						
HS200313-EP04-112-027	CHUM	112						
HS200313-EP04-112-028	CHUM	105						
HS200313-EP04-112-029	CHUM	116						
HS200313-EP04-112-030	CHUM	108						
HS200313-EP04-112-031	CHUM	106						
HS200313-EP04-112-032	CHUM	111						
HS200313-EP04-112-033	CHUM	104						
HS200313-EP04-112-034	CHUM	101						
HS200313-EP04-112-035	CHUM	130						
HS200313-EP04-112-036	CHUM	117						
HS200313-EP04-112-037	CHUM	111						
HS200313-EP04-112-038	CHUM	110						
HS200313-EP04-112-039	CHUM	104						
HS200313-EP04-112-040	CHUM	108						
HS200313-EP04-112-041	CHUM	105						
HS200313-EP04-112-042	CHUM	112						
HS200313-EP04-112-043	CHUM	114						
HS200313-EP04-112-044	CHUM	112						

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP04-112-045	CHUM	106						
HS200313-EP04-112-046	CHUM	135						
HS200313-EP04-112-047	CHUM	121						
HS200313-EP04-112-048	CHUM	132						
HS200313-EP04-112-049	CHUM	111						
HS200313-EP04-112-050	CHUM	111						
HS200313-EP04-112-051	CHUM	110						
HS200313-EP04-112-052	CHUM	108						
HS200313-EP04-112-053	CHUM	109						
HS200313-EP04-112-054	CHUM	108						
HS200313-EP04-112-055	CHUM	116						
HS200313-EP04-112-056	CHUM	137						
HS200313-EP04-112-057	CHUM	117						
HS200313-EP04-112-058	CHUM	115						
HS200313-EP04-112-059	CHUM	114						
HS200313-EP04-112-060	CHUM	111						
HS200313-EP04-112-061	CHUM	118						
HS200313-EP04-112-062	CHUM	109						
HS200313-EP04-112-063	CHUM	116						
HS200313-EP04-112-064	CHUM	128						
HS200313-EP04-112-065	CHUM	111						
HS200313-EP04-112-066	CHUM	105						
HS200313-EP04-112-067	CHUM	122						
HS200313-EP04-112-068	CHUM	103						
HS200313-EP04-112-069	CHUM	675		F				
HS200313-EP04-112-070	CHUM	602		F				
HS200313-EP05-112-001	CHUM	114	14					
HS200313-EP05-112-002	CHUM	113	14					
HS200313-EP05-112-003	CHUM	121	16					
HS200313-EP05-112-004	CHUM	111	12					
HS200313-EP05-112-005	CHUM	113	14					
HS200313-EP05-112-006	CHUM	115	15					
HS200313-EP05-112-007	CHUM	109	12					
HS200313-EP05-112-008	CHUM	116	16					
HS200313-EP05-112-009	CHUM	120	17					
HS200313-EP05-112-010	CHUM	555		F				
HS200313-EP05-112-011	CHUM	625		M				
HS200313-EP05-112-012	CHUM	660		F				
HS200313-EP05-112-013	CHUM	596		F				

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP05-112-014	CHUM	700		M				
HS200313-EP05-112-015	CHUM	577		M				
HS200313-EP05-112-016	CHUM	652		M				
HS200313-EP05-112-017	CHUM	640		M				
HS200313-EP05-112-018	CHUM	629		F				
HS200313-EP05-112-019	CHUM	642		M				
HS200313-EP05-112-020	CHUM	572		F				
HS200313-EP05-112-021	CHUM	587		F				
HS200313-EP05-112-022	CHUM	592		F				
HS200313-EP05-112-023	CHUM	672		M				
HS200313-EP05-112-024	CHUM	675		M				
HS200313-EP05-112-025	CHUM	679		F				
HS200313-EP05-112-026	CHUM	610		F				
HS200313-EP05-112-027	CHUM	653		M				
HS200313-EP06-112-001	CHUM	712		M				
HS200313-EP06-112-002	CHUM	705		F				
HS200313-EP06-112-003	CHUM	650		F				
HS200313-EP06-112-004	CHUM	594		F				
HS200313-EP06-112-005	CHUM	599		F				
HS200313-EP06-112-006	CHUM	630		F				
HS200313-EP06-112-007	CHUM	640		F				
HS200313-EP06-112-008	CHUM	543		M				
HS200313-EP06-112-009	CHUM	578		F				
HS200313-EP06-112-010	CHUM	593		F				
HS200313-EP06-112-011	CHUM	635		F				
HS200313-EP06-112-012	CHUM	610		F				
HS200313-EP07-112-001	CHUM	575		F				
HS200313-EP07-112-002	CHUM	650		M				
HS200313-EP07-112-003	CHUM	652		F				
HS200313-EP07-112-004	CHUM	650		F				
HS200313-EP07-112-005	CHUM	615		M				
HS200313-EP07-112-006	CHUM	617		M				
HS200313-EP07-112-007	CHUM	502		F				
HS200313-EP07-112-008	CHUM	544		M				
HS200313-EP07-112-009	CHUM	640		M				
HS200313-EP07-112-010	CHUM	576		F				
HS200313-EP07-112-011	CHUM	556		F				
HS200313-EP07-112-012	CHUM	555		M				
HS200313-EP08-112-001	CHUM	694		M				

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP08-112-002	CHUM	552		M				
HS200313-EP09-112-001	CHUM	570		M				
HS200313-EP09-112-002	CHUM	582		M				
HS200313-EP09-112-003	CHUM	655		M				
HS200313-EP10-112-001	CHUM	588		M				
HS200313-EP10-112-002	CHUM	584		M				
HS200313-EP10-112-003	CHUM	625		F				
HS200313-EP10-112-004	CHUM	606		F				
HS200313-EP10-112-005	CHUM	632		F				
HS200313-IVI02-112-001	CHUM	119	17					
HS200313-IVI02-112-002	CHUM	125	19					
HS200313-IVI02-112-003	CHUM	134	23					
HS200313-IVI02-112-004	CHUM	117	15					
HS200313-IVI02-112-005	CHUM	122	19					
HS200313-IVI02-112-006	CHUM	121	17					
HS200313-IVI02-112-007	CHUM	118	15					
HS200313-IVI02-112-008	CHUM	117	16					
HS200313-IVI02-112-009	CHUM	124	18					
HS200313-IVI02-112-010	CHUM	117	15					
HS200313-IVI02-112-011	CHUM	115	14					
HS200313-IVI02-112-012	CHUM	133	21					
HS200313-IVI02-112-013	CHUM	123	17					
HS200313-IVI02-112-014	CHUM	115	14					
HS200313-IVI03-112-001	CHUM	141	25					
HS200313-IVI03-112-002	CHUM	96	7					
HS200313-IVI03-112-003	CHUM	124	17					
HS200313-IVI03-112-004	CHUM	99	8					
HS200313-IVI03-112-005	CHUM	107	12					
HS200313-IVI03-112-006	CHUM	122	17					
HS200313-IVI03-112-007	CHUM	122	16					
HS200313-IVI04-112-001	CHUM	153	38					
HS200313-VI01-112-001	CHUM	630	3210	M				
HS200313-VI02-112-002	CHUM	735	5120	F				
HS200313-VI03-112-001	CHUM	132	24					
HS200313-VI03-112-002	CHUM	109	11					
HS200313-VI03-112-003	CHUM	116	15					
HS200313-VI03-112-004	CHUM	115	13					
HS200313-VI03-112-005	CHUM	117	14					
HS200313-VI03-112-006	CHUM	122	18					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-VI03-112-007	CHUM	116	16					
HS200313-VI03-112-008	CHUM	121	17					
HS200313-VI03-112-009	CHUM	114	13					
HS200313-VI03-112-010	CHUM	126	20					
HS200313-VI03-112-011	CHUM	110	12					
HS200313-VI03-112-012	CHUM	121	16					
HS200313-VI03-112-013	CHUM	125	18					
HS200313-VI03-112-014	CHUM	126	20					
HS200313-VI03-112-015	CHUM	122	16					
HS200313-VI03-112-016	CHUM	119	16					
HS200313-VI03-112-017	CHUM	120	15					
HS200313-VI03-112-018	CHUM	130	21					
HS200313-VI03-112-019	CHUM	635	3380	F				
HS200313-VI03-112-020	CHUM	571	2380	F				
HS200313-VI03-112-021	CHUM	670	3950	F				
HS200313-VI03-112-022	CHUM	640	3460	F				
HS200313-VI03-112-023	CHUM	653	3380	F				
HS200313-VI03-112-024	CHUM	685	4470	F				
HS200313-VI03-112-025	CHUM	638	3470	M				
HS200313-VI03-112-026	CHUM	649	3130	F				
HS200313-VI04-112-001	CHUM	130	21					
HS200313-VI04-112-002	CHUM	122	17					
HS200313-VI04-112-003	CHUM	130	21					
HS200313-VI04-112-004	CHUM	675	3740	M				
HS200313-VI04-112-005	CHUM	655	3690	F				
HS200313-VI04-112-006	CHUM	577	2600	M				
HS200313-VI05-112-001	CHUM	621	3120	M				
HS200313-VI05-112-002	CHUM	628	3230	F				
HS200313-VI05-112-003	CHUM	700	3930	F				
HS200313-VI05-112-004	CHUM	620	3130	F				
HS200313-VI05-112-005	CHUM	605	3100	M				
HS200313-VI05-112-006	CHUM	691	4050	F				
HS200313-VI05-112-007	CHUM	717	4480	F				
HS200313-VI05-112-008	CHUM	697	4710	F				
HS200313-VI05-112-009	CHUM	602	2860	M				
HS200313-VI05-112-010	CHUM	618	2840	F				
HS200313-VI05-112-011	CHUM	605	2860	F				
HS200313-VI05-112-012	CHUM	645	3550	M				
HS200313-EP02-115-001	COHO	648	2911	M				

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP02-115-002	COHO	515	1704	F				
HS200313-EP03-115-001	COHO	188	81				CWT	
HS200313-EP03-115-002	COHO	180	68					
HS200313-EP03-115-003	COHO	189	84					
HS200313-EP03-115-004	COHO	173	64					
HS200313-EP03-115-005	COHO	206	105				CWT	AD
HS200313-EP03-115-006	COHO	194	82					AD
HS200313-EP03-115-007	COHO	151	40				CWT	AD
HS200313-EP03-115-008	COHO	173	57					AD
HS200313-EP03-115-009	COHO	530		M				
HS200313-EP04-115-001	COHO	260	215					
HS200313-EP04-115-002	COHO	460		M				
HS200313-EP04-115-003	COHO	479		F				
HS200313-EP04-115-004	COHO	517		M				
HS200313-EP04-115-005	COHO	576		M				AD
HS200313-EP05-115-001	COHO	592		F				AD
HS200313-EP05-115-002	COHO	544		M				
HS200313-EP05-115-003	COHO	517		M				
HS200313-EP05-115-004	COHO	559		F			CWT	AD
HS200313-EP05-115-005	COHO	490		F				
HS200313-EP05-115-006	COHO	460		F				
HS200313-EP05-115-007	COHO	442		F				AD
HS200313-EP05-115-008	COHO	398		M				
HS200313-EP05-115-009	COHO	470		F				
HS200313-EP05-115-010	COHO	408		M				AD
HS200313-EP05-115-011	COHO	500		F				
HS200313-EP05-115-012	COHO	485		F				
HS200313-EP05-115-013	COHO	432		F				
HS200313-EP05-115-014	COHO	494		F				
HS200313-EP05-115-015	COHO	503		M				AD
HS200313-EP05-115-016	COHO	551		F				AD
HS200313-EP06-115-001	COHO	262	184					
HS200313-EP06-115-002	COHO	551		M			CWT	AD
HS200313-EP06-115-003	COHO	579		F				
HS200313-EP06-115-004	COHO	577		F				
HS200313-EP06-115-005	COHO	510		M				
HS200313-EP06-115-006	COHO	537		M				
HS200313-EP06-115-007	COHO	446		F				
HS200313-EP06-115-008	COHO	544		M				

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP06-115-009	COHO	573		F				
HS200313-EP06-115-010	COHO	493		F				
HS200313-EP06-115-011	COHO	462		M				AD
HS200313-EP06-115-012	COHO	506		M				
HS200313-EP06-115-013	COHO	459		F				
HS200313-EP06-115-014	COHO	445		F				
HS200313-EP06-115-015	COHO	426		F				
HS200313-EP06-115-016	COHO	506		F				
HS200313-EP06-115-017	COHO	578		F				AD
HS200313-EP06-115-018	COHO	483		F				
HS200313-EP06-115-019	COHO	582		M				
HS200313-EP06-115-020	COHO	506		F				AD
HS200313-EP07-115-001	COHO	610		F				
HS200313-EP07-115-002	COHO	570		F				
HS200313-EP07-115-003	COHO	522		M				
HS200313-EP07-115-004	COHO	579		F				
HS200313-EP07-115-005	COHO	590		M				
HS200313-EP07-115-006	COHO	480		F				AD
HS200313-EP07-115-007	COHO	440		M				
HS200313-EP07-115-008	COHO	462		F				
HS200313-EP07-115-009	COHO	520		F				
HS200313-EP07-115-010	COHO	604		F				
HS200313-EP07-115-011	COHO	520		F				
HS200313-EP07-115-012	COHO	542		F				
HS200313-EP07-115-013	COHO	533		F				AD
HS200313-EP07-115-014	COHO	563		M				
HS200313-EP07-115-015	COHO	530		F				AD
HS200313-EP07-115-016	COHO	507		F				
HS200313-EP07-115-017	COHO	445		F				
HS200313-EP07-115-018	COHO	490		F				
HS200313-EP07-115-019	COHO	486		F				
HS200313-EP07-115-020	COHO	600		F				
HS200313-EP08-115-001	COHO	535		F				
HS200313-EP08-115-002	COHO	550		M				
HS200313-EP09-115-001	COHO	515		F				
HS200313-EP11-115-001	COHO	572		M				AD
HS200313-IVI01-115-001	COHO	162	47					
HS200313-IVI01-115-002	COHO	171	58					
HS200313-IVI01-115-003	COHO	141	31					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-IVI01-115-004	COHO	154	39					
HS200313-IVI01-115-005	COHO	164	49					
HS200313-IVI01-115-006	COHO	160	40					
HS200313-IVI01-115-007	COHO	136	30					
HS200313-IVI01-115-008	COHO	152	39					
HS200313-IVI01-115-009	COHO	130	28					
HS200313-IVI01-115-010	COHO	148	35					
HS200313-IVI01-115-011	COHO	151	39					
HS200313-IVI02-115-001	COHO	113	15					
HS200313-IVI02-115-002	COHO	132	25					
HS200313-IVI03-115-001	COHO	194	74					
HS200313-IVI03-115-002	COHO	182	79					
HS200313-IVI03-115-003	COHO	185	72					
HS200313-IVI03-115-004	COHO	172	59					
HS200313-IVI03-115-005	COHO	182	72					
HS200313-IVI03-115-006	COHO	166	55					
HS200313-IVI03-115-007	COHO	172	55					AD
HS200313-IVI03-115-008	COHO	175	65					
HS200313-IVI03-115-009	COHO	155	51					
HS200313-IVI03-115-010	COHO	188	77					
HS200313-IVI03-115-011	COHO	161	49					
HS200313-IVI03-115-012	COHO	182	71					
HS200313-IVI03-115-013	COHO	179	68					
HS200313-IVI03-115-014	COHO	162	48					
HS200313-IVI03-115-015	COHO	145	36					
HS200313-IVI03-115-016	COHO	175	68					
HS200313-IVI03-115-017	COHO	175	67					
HS200313-IVI03-115-018	COHO	193	92					
HS200313-IVI03-115-019	COHO	194	85					
HS200313-IVI03-115-020	COHO	185	75					
HS200313-IVI03-115-021	COHO	180	58					
HS200313-IVI03-115-022	COHO	172	67					
HS200313-IVI03-115-023	COHO	182	52					
HS200313-IVI03-115-024	COHO	177	71					
HS200313-IVI03-115-025	COHO	148	40					
HS200313-IVI03-115-026	COHO	170	55					
HS200313-IVI03-115-027	COHO	133	28					
HS200313-IVI03-115-028	COHO	142	35					
HS200313-IVI03-115-029	COHO	162	54					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-IVI03-115-030	COHO	159	46					
HS200313-IVI03-115-031	COHO	499	1470	M				AD
HS200313-IVI03-115-032	COHO	170						
HS200313-IVI03-115-033	COHO	181						
HS200313-IVI03-115-034	COHO	165						
HS200313-IVI03-115-035	COHO	144						
HS200313-IVI03-115-036	COHO	198						AD
HS200313-IVI03-115-037	COHO	178						
HS200313-IVI03-115-038	COHO	168						
HS200313-IVI03-115-039	COHO	208						
HS200313-IVI03-115-040	COHO	171						
HS200313-IVI03-115-041	COHO	158						
HS200313-IVI03-115-042	COHO	170						
HS200313-IVI03-115-043	COHO	158						
HS200313-IVI03-115-044	COHO	152						
HS200313-IVI03-115-045	COHO	166						
HS200313-IVI03-115-046	COHO	160						
HS200313-IVI03-115-047	COHO	162						
HS200313-IVI03-115-048	COHO	175						
HS200313-IVI03-115-049	COHO	162						
HS200313-IVI03-115-050	COHO	164						
HS200313-IVI03-115-051	COHO	175						
HS200313-IVI03-115-052	COHO	161						
HS200313-IVI03-115-053	COHO	164						
HS200313-IVI03-115-054	COHO	155						
HS200313-IVI03-115-055	COHO	167						
HS200313-IVI03-115-056	COHO	171						
HS200313-IVI03-115-057	COHO	175						AD
HS200313-IVI03-115-058	COHO	198						
HS200313-IVI03-115-059	COHO	181						
HS200313-IVI03-115-060	COHO	166						
HS200313-IVI04-115-001	COHO	185	69					
HS200313-IVI04-115-002	COHO	185	80					
HS200313-IVI04-115-003	COHO	186	74					
HS200313-IVI04-115-004	COHO	161	50					
HS200313-IVI04-115-005	COHO	182	67					
HS200313-IVI04-115-006	COHO	179	66					
HS200313-IVI04-115-007	COHO	194	81					
HS200313-IVI04-115-008	COHO	177	61					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-IVI04-115-009	COHO	165	50					
HS200313-IVI04-115-010	COHO	175	65					
HS200313-IVI04-115-011	COHO	189	80					
HS200313-IVI04-115-012	COHO	178	63					
HS200313-IVI04-115-013	COHO	182	74					
HS200313-IVI04-115-014	COHO	178	69					
HS200313-IVI04-115-015	COHO	195	77					
HS200313-IVI04-115-016	COHO	170	60					
HS200313-IVI04-115-017	COHO	178	69					
HS200313-IVI04-115-018	COHO	177	61				CWT	AD
HS200313-IVI04-115-019	COHO	178	63				CWT	AD
HS200313-IVI04-115-020	COHO	227	154					
HS200313-IVI04-115-021	COHO	212	116					
HS200313-IVI04-115-022	COHO	208	102					
HS200313-IVI04-115-023	COHO	238	169					
HS200313-IVI04-115-024	COHO	214	116					
HS200313-IVI04-115-025	COHO	184	84					
HS200313-IVI04-115-026	COHO	167	58					
HS200313-IVI04-115-027	COHO	177	61					
HS200313-IVI04-115-028	COHO	173	57					
HS200313-IVI04-115-029	COHO	227	147					
HS200313-IVI04-115-030	COHO	252	213					
HS200313-IVI04-115-031	COHO	224						
HS200313-IVI04-115-032	COHO	161						
HS200313-IVI04-115-033	COHO	171						
HS200313-IVI04-115-034	COHO	166						
HS200313-IVI04-115-035	COHO	175						
HS200313-IVI04-115-036	COHO	174						
HS200313-IVI04-115-037	COHO	168						
HS200313-IVI04-115-038	COHO	167						
HS200313-IVI04-115-039	COHO	155						
HS200313-IVI04-115-040	COHO	167						
HS200313-IVI04-115-041	COHO	145						
HS200313-IVI04-115-042	COHO	174						
HS200313-IVI04-115-043	COHO	177						
HS200313-IVI04-115-044	COHO	179						
HS200313-IVI04-115-045	COHO	179						
HS200313-IVI04-115-046	COHO	173						
HS200313-IVI04-115-047	COHO	192						

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-IVI04-115-048	COHO	187						
HS200313-IVI04-115-049	COHO	175						AD
HS200313-IVI04-115-050	COHO	166						
HS200313-IVI04-115-051	COHO	171						
HS200313-IVI04-115-052	COHO	175						
HS200313-IVI04-115-053	COHO	178						AD
HS200313-VI01-115-001	COHO	221	134					AD
HS200313-VI04-115-001	COHO	189	73					AD
HS200313-VI04-115-002	COHO	198	76					
HS200313-VI04-115-003	COHO	190	82					
HS200313-VI04-115-004	COHO	190	84					
HS200313-VI04-115-005	COHO	257	211					
HS200313-VI04-115-006	COHO	195	81				CWT	
HS200313-VI04-115-007	COHO	175	59					AD
HS200313-VI04-115-008	COHO	165	50					
HS200313-VI04-115-009	COHO	481	1430	F				
HS200313-VI04-115-010	COHO	613	2950	M				
HS200313-VI04-115-011	COHO	499	1660	M				
HS200313-VI04-115-012	COHO	550	2080	M				
HS200313-VI04-115-013	COHO	560	2180	M			CWT	AD
HS200313-VI04-115-014	COHO	600	3140	F				
HS200313-VI04-115-015	COHO	466	1230	F				
HS200313-VI04-115-016	COHO	628	3290	F				
HS200313-VI04-115-017	COHO	681	4280	M				
HS200313-VI05-115-001	COHO	579	2690	M				
HS200313-EP06-108-001	PINK	468		M				
HS200313-EP07-108-001	PINK	502		F				
HS200313-EP07-108-002	PINK	457		F				
HS200313-EP08-108-001	PINK	457		M				
HS200313-EP08-108-002	PINK	492		F				
HS200313-EP09-108-001	PINK	505		F				
HS200313-EP10-108-001	PINK	496		F				
HS200313-EP10-108-002	PINK	440		M				
HS200313-EP03-118-001	SOCKEYE	147	31					
HS200313-EP03-118-002	SOCKEYE	98	8					
HS200313-EP03-118-003	SOCKEYE	106	11					
HS200313-EP03-118-004	SOCKEYE	109	10					
HS200313-EP03-118-005	SOCKEYE	131	21					
HS200313-EP03-118-006	SOCKEYE	107	11					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP03-118-007	SOCKEYE	100	9					
HS200313-EP03-118-008	SOCKEYE	124	17					
HS200313-EP03-118-009	SOCKEYE	102	10					
HS200313-EP03-118-010	SOCKEYE	104	11					
HS200313-EP03-118-011	SOCKEYE	100	10					
HS200313-EP03-118-012	SOCKEYE	97	8					
HS200313-EP03-118-013	SOCKEYE	118	16					
HS200313-EP03-118-014	SOCKEYE	99	10					
HS200313-EP03-118-015	SOCKEYE	130	20					
HS200313-EP03-118-016	SOCKEYE	114	15					
HS200313-EP03-118-017	SOCKEYE	97	9					
HS200313-EP03-118-018	SOCKEYE	132	22					
HS200313-EP03-118-019	SOCKEYE	149	33					
HS200313-EP03-118-020	SOCKEYE	98	8					
HS200313-EP03-118-021	SOCKEYE	103	9					
HS200313-EP03-118-022	SOCKEYE	133	23					
HS200313-EP03-118-023	SOCKEYE	115	14					
HS200313-EP03-118-024	SOCKEYE	101	10					
HS200313-EP03-118-025	SOCKEYE	102	9					
HS200313-EP03-118-026	SOCKEYE	125	19					
HS200313-EP03-118-027	SOCKEYE	118	17					
HS200313-EP03-118-028	SOCKEYE	140	25					
HS200313-EP03-118-029	SOCKEYE	138	22					
HS200313-EP03-118-030	SOCKEYE	110	11					
HS200313-EP03-118-031	SOCKEYE	105						
HS200313-EP03-118-032	SOCKEYE	100						
HS200313-EP03-118-033	SOCKEYE	103						
HS200313-EP03-118-034	SOCKEYE	99						
HS200313-EP03-118-035	SOCKEYE	99						
HS200313-EP03-118-036	SOCKEYE	121						
HS200313-EP03-118-037	SOCKEYE	108						
HS200313-EP03-118-038	SOCKEYE	103						
HS200313-EP03-118-039	SOCKEYE	103						
HS200313-EP03-118-040	SOCKEYE	97						
HS200313-EP03-118-041	SOCKEYE	92						
HS200313-EP03-118-042	SOCKEYE	114						
HS200313-EP03-118-043	SOCKEYE	110						
HS200313-EP03-118-044	SOCKEYE	97						
HS200313-EP03-118-045	SOCKEYE	93						

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP03-118-046	SOCKEYE	126						
HS200313-EP03-118-047	SOCKEYE	133						
HS200313-EP03-118-048	SOCKEYE	100						
HS200313-EP03-118-049	SOCKEYE	102						
HS200313-EP03-118-050	SOCKEYE	105						
HS200313-EP03-118-051	SOCKEYE	102						
HS200313-EP03-118-052	SOCKEYE	120						
HS200313-EP03-118-053	SOCKEYE	123						
HS200313-EP03-118-054	SOCKEYE	117						
HS200313-EP03-118-055	SOCKEYE	116						
HS200313-EP03-118-056	SOCKEYE	99						
HS200313-EP03-118-057	SOCKEYE	113						
HS200313-EP03-118-058	SOCKEYE	126						
HS200313-EP03-118-059	SOCKEYE	95						
HS200313-EP03-118-060	SOCKEYE	108						
HS200313-EP03-118-061	SOCKEYE	97						
HS200313-EP03-118-062	SOCKEYE	120						
HS200313-EP03-118-063	SOCKEYE	113						
HS200313-EP03-118-064	SOCKEYE	119						
HS200313-EP03-118-065	SOCKEYE	100						
HS200313-EP03-118-066	SOCKEYE	108						
HS200313-EP03-118-067	SOCKEYE	97						
HS200313-EP03-118-068	SOCKEYE	100						
HS200313-EP03-118-069	SOCKEYE	96						
HS200313-EP03-118-070	SOCKEYE	98						
HS200313-EP03-118-071	SOCKEYE	97						
HS200313-EP03-118-072	SOCKEYE	112						
HS200313-EP03-118-073	SOCKEYE	110						
HS200313-EP03-118-074	SOCKEYE	110						
HS200313-EP03-118-075	SOCKEYE	105						
HS200313-EP03-118-076	SOCKEYE	107						
HS200313-EP03-118-077	SOCKEYE	111						
HS200313-EP03-118-078	SOCKEYE	110						
HS200313-EP03-118-079	SOCKEYE	112						
HS200313-EP03-118-080	SOCKEYE	136						
HS200313-EP03-118-081	SOCKEYE	97						
HS200313-EP03-118-082	SOCKEYE	95						
HS200313-EP03-118-083	SOCKEYE	98						
HS200313-EP03-118-084	SOCKEYE	98						

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP03-118-085	SOCKEYE	103						
HS200313-EP03-118-086	SOCKEYE	100						
HS200313-EP03-118-087	SOCKEYE	112						
HS200313-EP03-118-088	SOCKEYE	108						
HS200313-EP03-118-089	SOCKEYE	111						
HS200313-EP03-118-090	SOCKEYE	117						
HS200313-EP03-118-091	SOCKEYE	130						
HS200313-EP03-118-092	SOCKEYE	113						
HS200313-EP03-118-093	SOCKEYE	124						
HS200313-EP03-118-094	SOCKEYE	106						
HS200313-EP03-118-095	SOCKEYE	99						
HS200313-EP03-118-096	SOCKEYE	104						
HS200313-EP03-118-097	SOCKEYE	107						
HS200313-EP03-118-098	SOCKEYE	135						
HS200313-EP03-118-099	SOCKEYE	112						
HS200313-EP03-118-100	SOCKEYE	128						
HS200313-EP04-118-001	SOCKEYE	129	22					
HS200313-EP04-118-002	SOCKEYE	100	9					
HS200313-EP04-118-00	SOCKEYE	105	11					
HS200313-EP04-118-004	SOCKEYE	132	23					
HS200313-EP04-118-005	SOCKEYE	126	21					
HS200313-EP04-118-006	SOCKEYE	124	20					
HS200313-EP04-118-007	SOCKEYE	135	29					
HS200313-EP04-118-008	SOCKEYE	124	21					
HS200313-EP04-118-009	SOCKEYE	120	19					
HS200313-EP04-118-010	SOCKEYE	109	14					
HS200313-EP04-118-011	SOCKEYE	103	11					
HS200313-EP04-118-012	SOCKEYE	112	13					
HS200313-EP04-118-013	SOCKEYE	108	13					
HS200313-EP04-118-014	SOCKEYE	124	21					
HS200313-EP04-118-015	SOCKEYE	123	19					
HS200313-EP04-118-016	SOCKEYE	126	20					
HS200313-EP04-118-017	SOCKEYE	130	25					
HS200313-EP04-118-018	SOCKEYE	103	11					
HS200313-EP04-118-019	SOCKEYE	105	13					
HS200313-EP04-118-020	SOCKEYE	134	24					
HS200313-EP04-118-021	SOCKEYE	98	10					
HS200313-EP04-118-022	SOCKEYE	108	11					
HS200313-EP04-118-023	SOCKEYE	116	16					

Table 2. Biological data collected for each salmon caught on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Fish Number	Species	Fork Length	Whole Body Weight (g wet)	Sex	Stomach Content Weight (g wet)	CWT age	CWT	Fin Clip
HS200313-EP04-118-024	SOCKEYE	122	17					
HS200313-EP04-118-025	SOCKEYE	105	13					
HS200313-EP04-118-026	SOCKEYE	104	10					
HS200313-EP04-118-027	SOCKEYE	111	13					
HS200313-EP05-118-001	SOCKEYE	126	19					
HS200313-EP05-118-002	SOCKEYE	128	21					
HS200313-EP05-118-003	SOCKEYE	127	23					
HS200313-EP05-118-004	SOCKEYE	96	9					
HS200313-EP05-118-005	SOCKEYE	108	11					
HS200313-EP05-118-006	SOCKEYE	98	10					
HS200313-EP05-118-007	SOCKEYE	119	18					
HS200313-EP06-118-001	SOCKEYE	100	8					
HS200313-VI03-118-001	SOCKEYE	145	29					
HS200313-VI03-118-002	SOCKEYE	141	27					
HS200313-VI03-118-003	SOCKEYE	129	21					
HS200313-VI03-118-004	SOCKEYE	110	12					
HS200313-VI03-118-005	SOCKEYE	118	15					
HS200313-VI03-118-006	SOCKEYE	126	20					
HS200313-VI03-118-007	SOCKEYE	104	11					
HS200313-VI03-118-008	SOCKEYE	114	15					
HS200313-VI03-118-009	SOCKEYE	129	22					
HS200313-VI03-118-010	SOCKEYE	110	12					
HS200313-VI03-118-011	SOCKEYE	104	13					
HS200313-VI03-118-012	SOCKEYE	128	19					
HS200313-VI03-118-013	SOCKEYE	141	27					
HS200313-VI03-118-014	SOCKEYE	108	12					
HS200313-VI03-118-015	SOCKEYE	111	12					
HS200313-VI03-118-016	SOCKEYE	106	12					
HS200313-VI03-118-017	SOCKEYE	118	15					
HS200313-VI03-118-018	SOCKEYE	118	15					
HS200313-VI03-118-019	SOCKEYE	142	26					
HS200313-VI03-118-020	SOCKEYE	120	16					
HS200313-VI03-118-021	SOCKEYE	117	16					
HS200313-VI04-118-001	SOCKEYE	111	14					
HS200313-EP05-128-001	STEELHEAD	235	108					

Table 3. Physical oceanographic data collected on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Station ID	Station Name	Region	Date UTC	Time UTC	Latitude (°N)	Longitude (°W)	Bottom Depth (m)	SST (°C)	SSS (ppt)	NO3 umoles/L	Si umoles/	PO4 umoles/L	Chl A ug/L
HS200313EP01	ESTEVAN PT	VI	09-Jun-03	14:04	49.353	126.528	34			13.4	22.3	1.45	0.86
HS200313EP02	ESTEVAN PT	VI	09-Jun-03	18:09	49.317	126.605	83			9.2	16.7	1.41	4.04
HS200313EP03	ESTEVAN PT	VI	09-Jun-03	19:32	49.279	126.682	111			3	7.8	0.81	
HS200313EP04	ESTEVAN PT	VI	09-Jun-03	21:00	49.245	126.758	120			2.9	7.6	0.79	5.93
HS200313EP05	ESTEVAN PT	VI	09-Jun-03	22:27	49.204	126.830	143			3.4	8.9	0.79	8.94
HS200313EP06	ESTEVAN PT	VI	09-Jun-03	23:52	49.168	126.910	191			1.8	5.2	0.62	10.55
HS200313EP07	ESTEVAN PT	VI	10-Jun-03	01:26	49.137	126.987	454			2.7	7.7	0.61	4.47
HS200313EP08	ESTEVAN PT	VI	10-Jun-03	14:07	49.035	127.170	1547			5.4	8.9	0.94	1.92
HS200313EP09	ESTEVAN PT	VI	10-Jun-03	16:31	48.898	127.428	2037			3.7	8.1	0.67	3.37
HS200313EP10	ESTEVAN PT	VI	10-Jun-03	18:53	48.765	127.683	2564			0.4	4.6	0.41	
HS200313EP11	ESTEVAN PT	VI	10-Jun-03	21:21	48.627	127.950	2533			0.2	4.5	0.36	1.66
HS200313EP12	ESTEVAN PT	VI	10-Jun-03	23:46	48.492	128.205	2578			0	0.9	0.27	0.8
HS200313IVI01	KYUQUOT SD	IVI	11-Jun-03	13:56	50.063	127.260	160			11.5	24	1.33	1.71
HS200313IVI02	KYUQUOT SD	IVI	11-Jun-03	15:29	50.085	127.171	205			11.8	26.1	1.41	2.29
HS200313IVI03	KYUQUOT SD	IVI	11-Jun-03	17:11	50.006	127.182	169	11.47	31.35	5.4	11.3	0.74	4.29

Table 3. Physical oceanographic data collected on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Station ID	Station Name	Region	Date UTC	Time UTC	Latitude (°N)	Longitude (°W)	Bottom Depth (m)	SST (°C)	SSS (ppt)	NO3 umoles/L	Si umoles/	PO4 umoles/L	Chl A ug/L
HS200313IVI04	KYUQUOT SD	IVI	11-Jun-03	18:14	49.994	127.227	175	10.24	31.82	7.1	14.5	0.92	6.09
HS200313VI01	OFF KYUQUOT SD	VI	11-Jun-03	19:47	49.956	127.012	110	10.09	31.88	7.1	13.2	0.96	5.51
HS200313VI02	OFF KYUQUOT SD	VI	11-Jun-03	20:54	49.923	127.315	58	10.18	32.02	7.2	12.4	0.92	5.34
HS200313VI03	OFF KYUQUOT SD	VI	11-Jun-03	22:15	49.899	127.363	63	10.12	32.19	7.5	12.4	0.87	4.41
HS200313VI04	OFF KYUQUOT SD	VI	11-Jun-03	23:38	49.842	127.464	75	10.09	32.16	7.3	11.7	1.02	3.41
HS200313VI05	OFF KYUQUOT SD	VI	12-Jun-03	00:58	49.779	127.559	120	10.05	32.18	7.4	15	1	6.55

Table 4. Zooplankton data from bongo tows collected on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Station ID	Station Name	Region	Latitude (°N)	Longitude (°W)	Date	Time	Target Depth (m)	Tow Duration	Wire Angle (°)	Volume Sefved (cu m)	Plankton Weights by Size Faction (g dry / 1000 cu m)				
											8.0mm	1.7mm	1.0mm	0.25mm	Total
HS200313EP01	ESTEVAN PT	VI	49.353	126.529	09-Jun-03	07:11	25	00:04		5	0	78.39	38.24	116.63	233.27
HS200313EP02	ESTEVAN PT	VI	49.317	126.606	09-Jun-03	11:18	75	00:04		16	272.04	39.32	8.24	46.29	365.88
HS200313EP03	ESTEVAN PT	VI	49.278	126.683	09-Jun-03	12:41	100	00:09		20	72.8	44.57	11.39	73.29	202.04
HS200313EP04	ESTEVAN PT	VI	49.245	126.759	09-Jun-03	14:09	110	00:10		30	17.4	11.04	17.74	34.13	80.32
HS200313EP05	ESTEVAN PT	VI	49.203	126.832	09-Jun-03	15:37	130	00:08		43	131.59	8.3	17.05	24.66	181.59
HS200313EP06	ESTEVAN PT	VI	49.166	126.913	09-Jun-03	17:06	160	00:10		72	44.07	88.14	23.35	38.41	193.96
HS200313EP07	ESTEVAN PT	VI	49.135	126.988	09-Jun-03	18:42	150	00:11		56	51.65	19.26	21.59	26.81	119.31
HS200313EP08	ESTEVAN PT	VI	49.034	127.173	10-Jun-03	07:24	150	00:08		49	31.23	11.43	5.71	21.63	70
HS200313EP09	ESTEVAN PT	VI	48.896	127.429	10-Jun-03	09:47	150	00:10		67	4.96	6.16	2.86	17.14	31.12
HS200313EP10	ESTEVAN PT	VI	48.762	127.684	10-Jun-03	12:18	150	00:00		55	27.18	10.76	4.38	14.41	56.72
HS200313EP11	ESTEVAN PT	VI	48.626	127.956	10-Jun-03	14:47	150	00:00		55	0	6.74	1.64	3.28	11.66

Table 4. Zooplankton data from bongo tows collected on the CCGS W.E. RICKER survey to the Gulf of Alaska, 09/06/2003 - 11/06/2003.

Station ID	Station Name	Region	Latitude (°N)	Longitude (°W)	Date	Time	Target Depth (m)	Tow Duration	Wire Angle (°)	Volume Seived (cu m)	Plankton Weights by Size Faction (g dry / 1000 cu m)				
											8.0mm	1.7mm	1.0mm	0.25mm	Total
HS200313EP12	ESTEVAN PT	VI	49.488	128.205	10-Jun-03	17:14	150	00:00		52	5.38	69.75	21.71	10.95	107.8
HS200313IVI01	KYUQUOT SD	IVI	50.068	127.251	11-Jun-03	07:15	150	00:00		36	0	19.54	7.43	19.54	46.5
HS200313IVI02	KYUQUOT SD	IVI	50.086	127.171	11-Jun-03	08:51	150	00:00		37	0	22.7	13.13	18.32	54.15
HS200313IVI03	KYUQUOT SD	IVI	50.006	127.180	11-Jun-03	10:29	150	00:00		35	0	34.2	12.16	28.55	74.91
HS200313IVI04	KYUQUOT SD	IVI	49.992	127.231	11-Jun-03	11:56	140	00:00		43	29.49	22.47	8.43	40.96	101.34
HS200313VI01	OFF KYUQUOT SD	VI	49.955	127.276	11-Jun-03	12:55	90	00:05		21	10.23	41.41	13.64	65.28	130.56
HS200313VI02	OFF KYUQUOT SD	VI	49.923	127.314	11-Jun-03	14:00	50	00:03		14	360.4	77.91	11.65	74.99	524.95
HS200313VI03	OFF KYUQUOT SD	VI	49.900	127.360	11-Jun-03	15:22	55	00:03		22	272.1	40.61	14.44	70.39	397.55
HS200313VI04	OFF KYUQUOT SD	VI	49.842	127.464	11-Jun-03	16:45	65	00:03		27	134.51	25.8	13.64	53.8	227.75
HS200313VI05	OFF KYUQUOT SD	VI	49.782	127.556	11-Jun-03	18:07	110	00:05		41	59.95	18.01	51.81	29.85	159.61

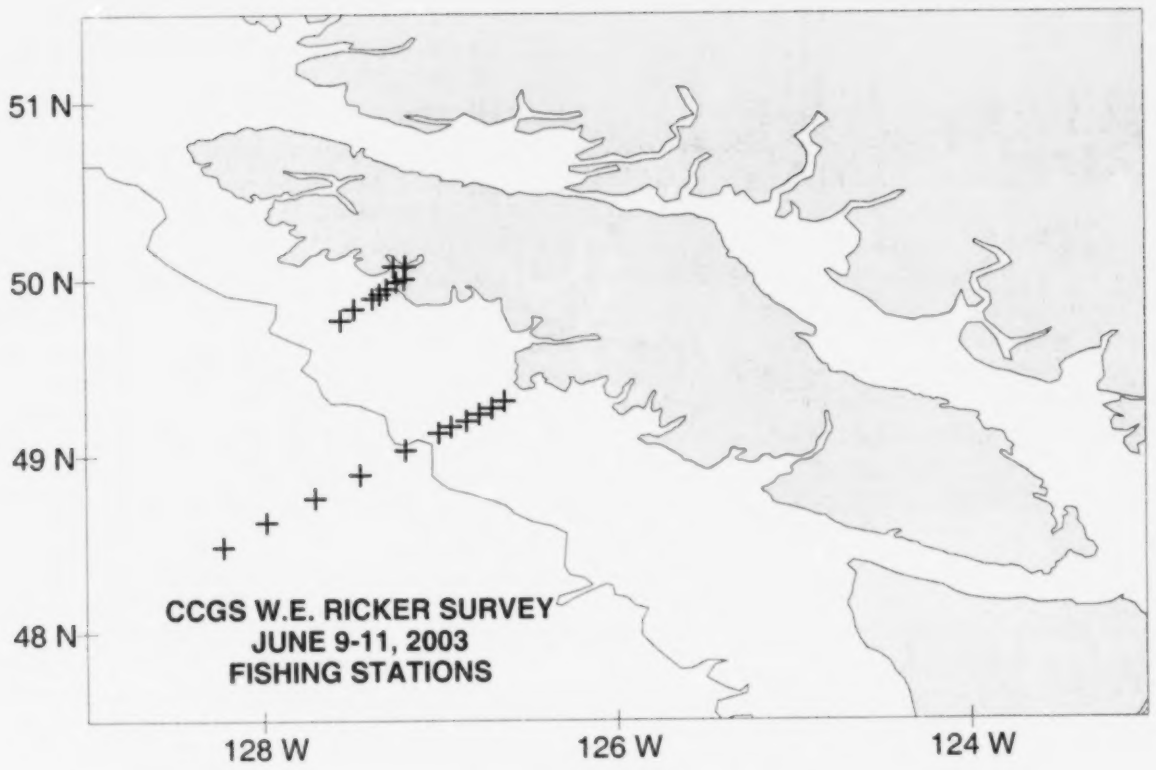

Figure 1. Fishing stations on the CCGS W. E. Ricker survey off Vancouver Island from June 9-11, 2003

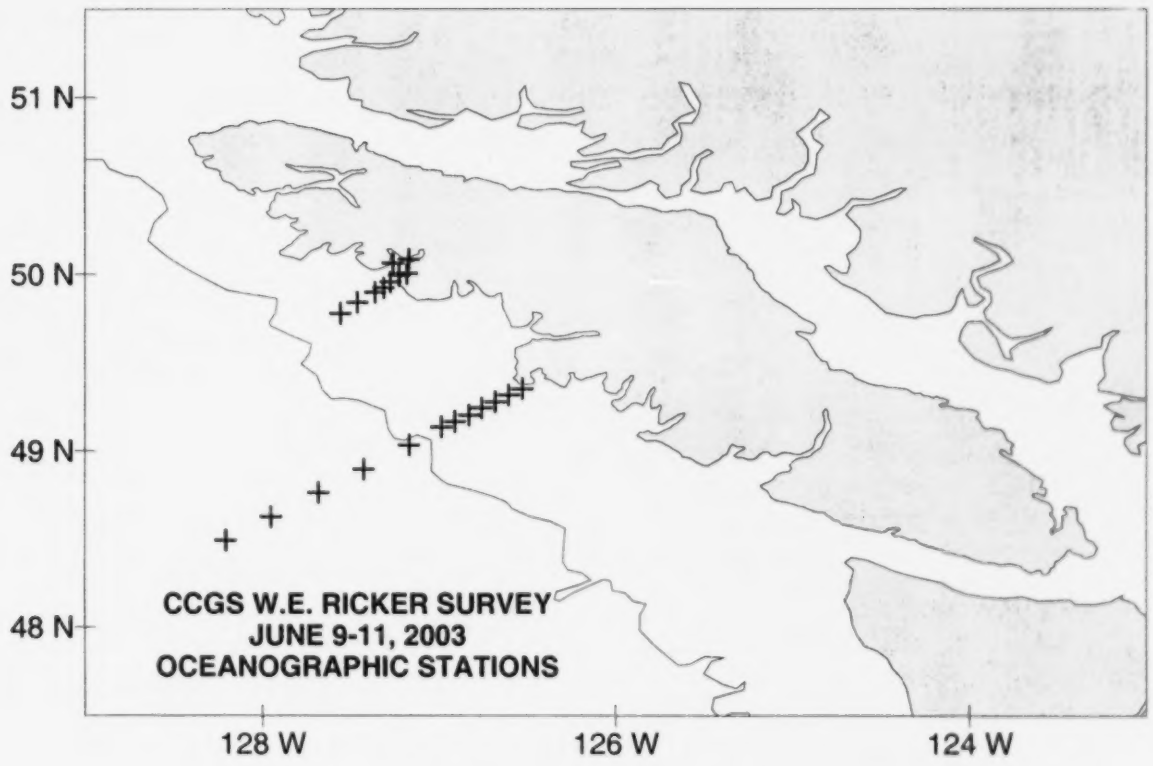

Figure 2. Oceanographic stations on the CCGS W. E. Ricker survey to the Gulf of Alaska from June 9-11, 2003.

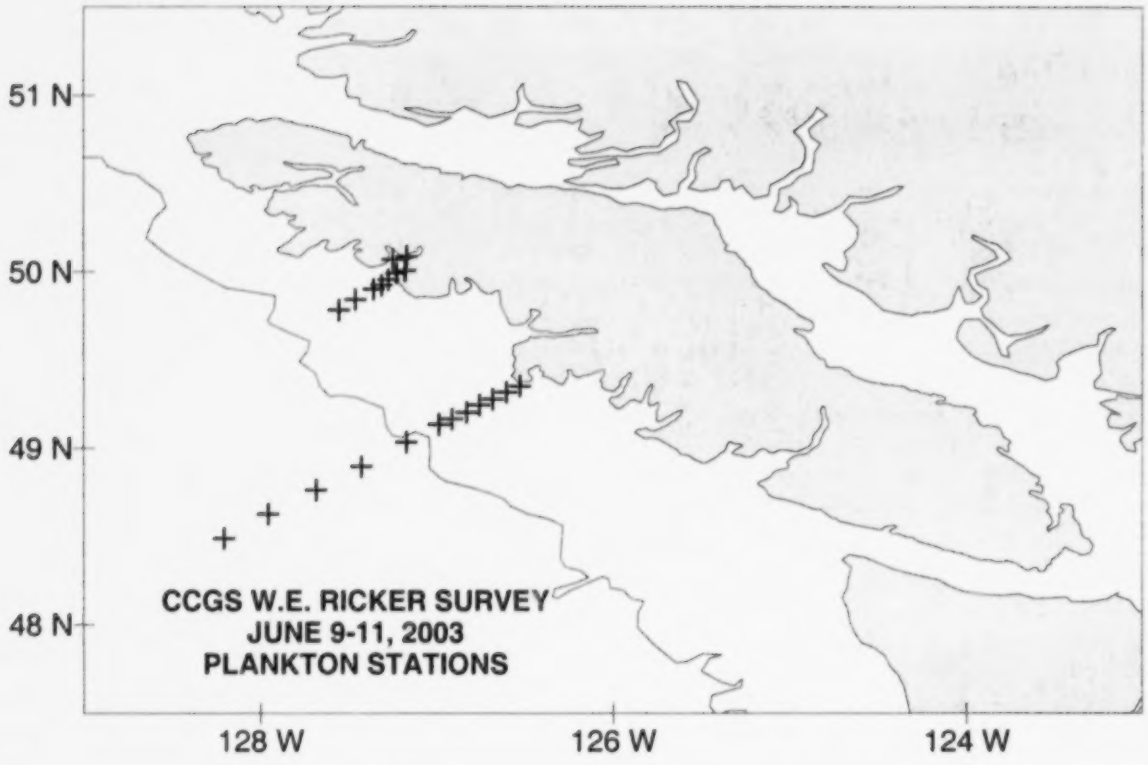

Figure 3. Plankton stations on the CCGS W. E. Ricker survey to the Gulf of Alaska from June 9-11, 2003.

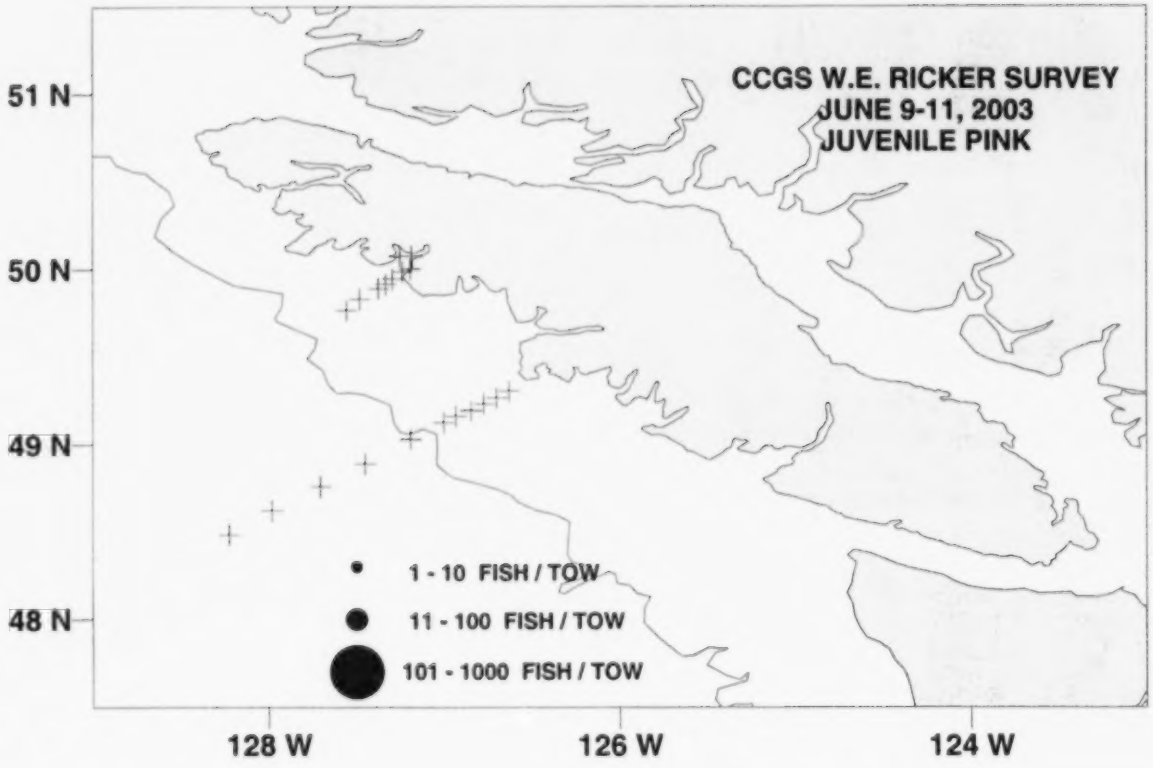

Figure 4. Distribution of juvenile (age 0.0) pink salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

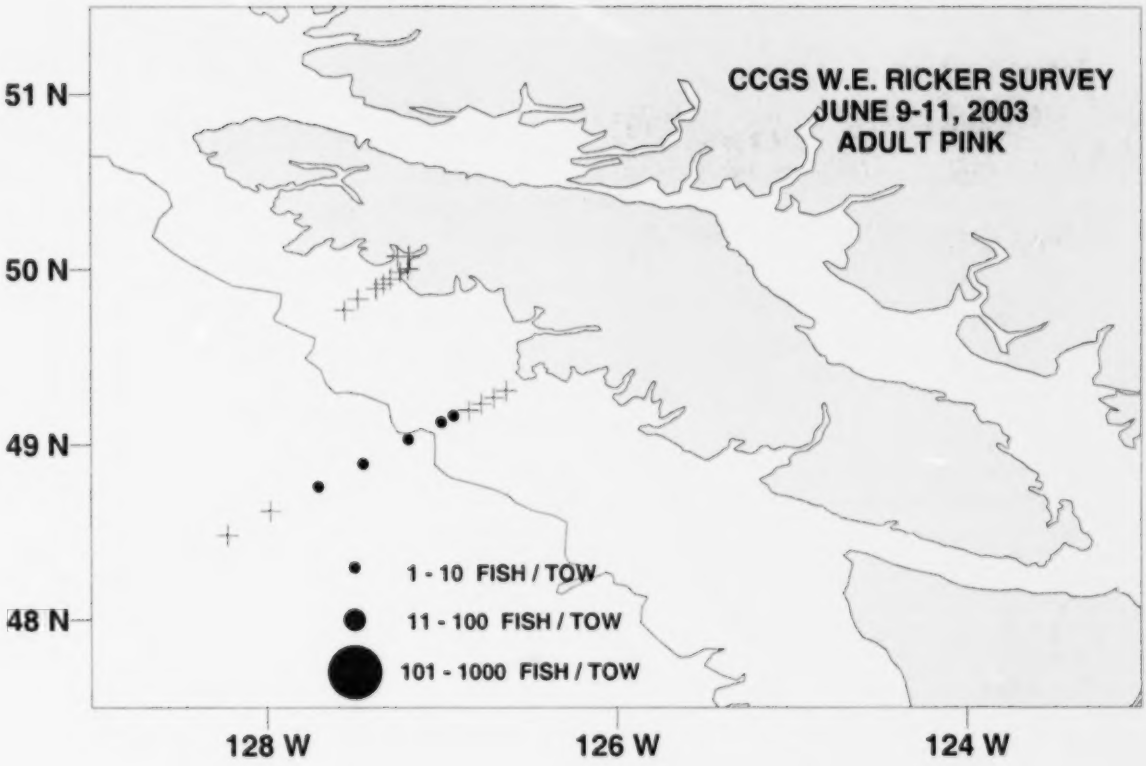

Figure 5. Distribution of adult (age 0.1+) pink salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

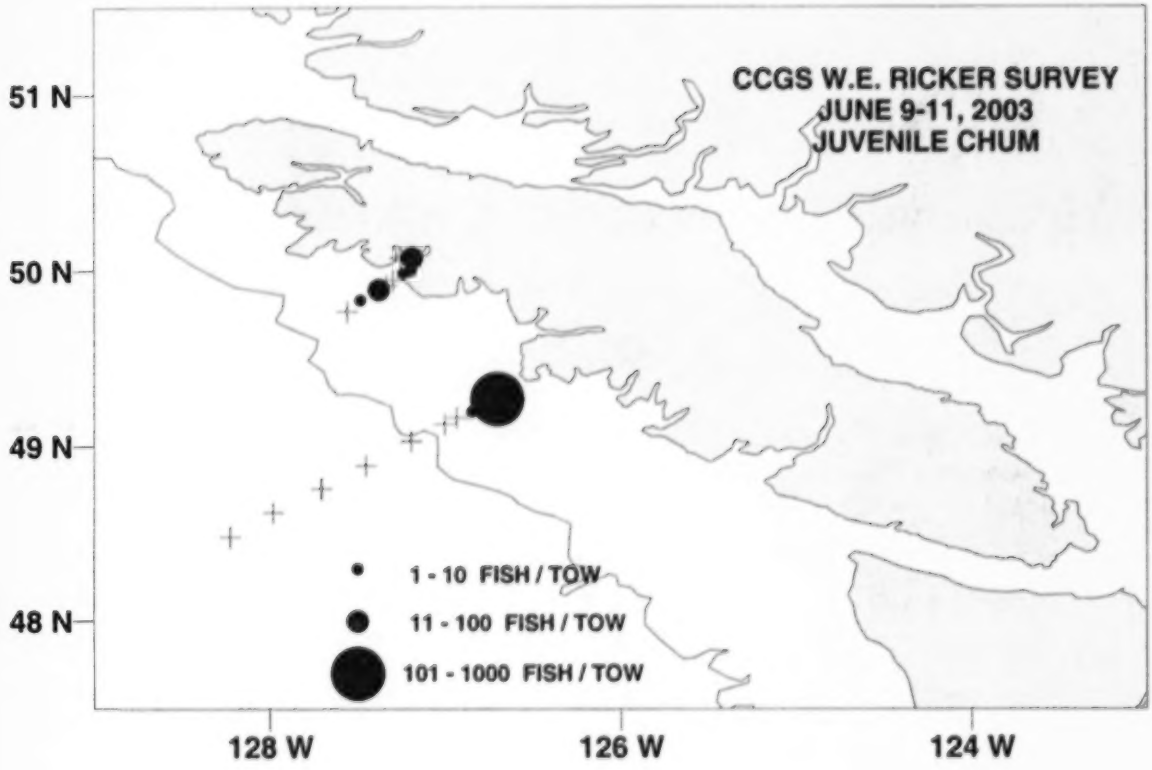

Figure 6. Distribution of juvenile (age 0.0+) chum salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

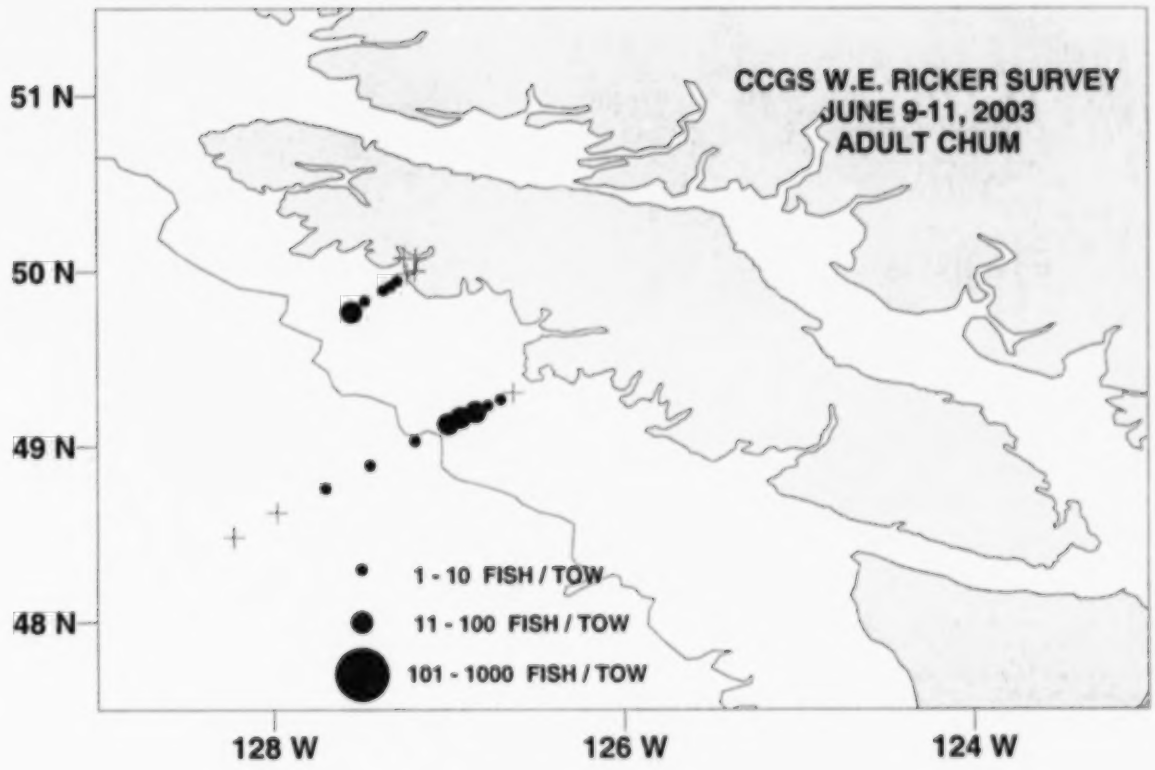

Figure 7. Distribution of adult chum salmon salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

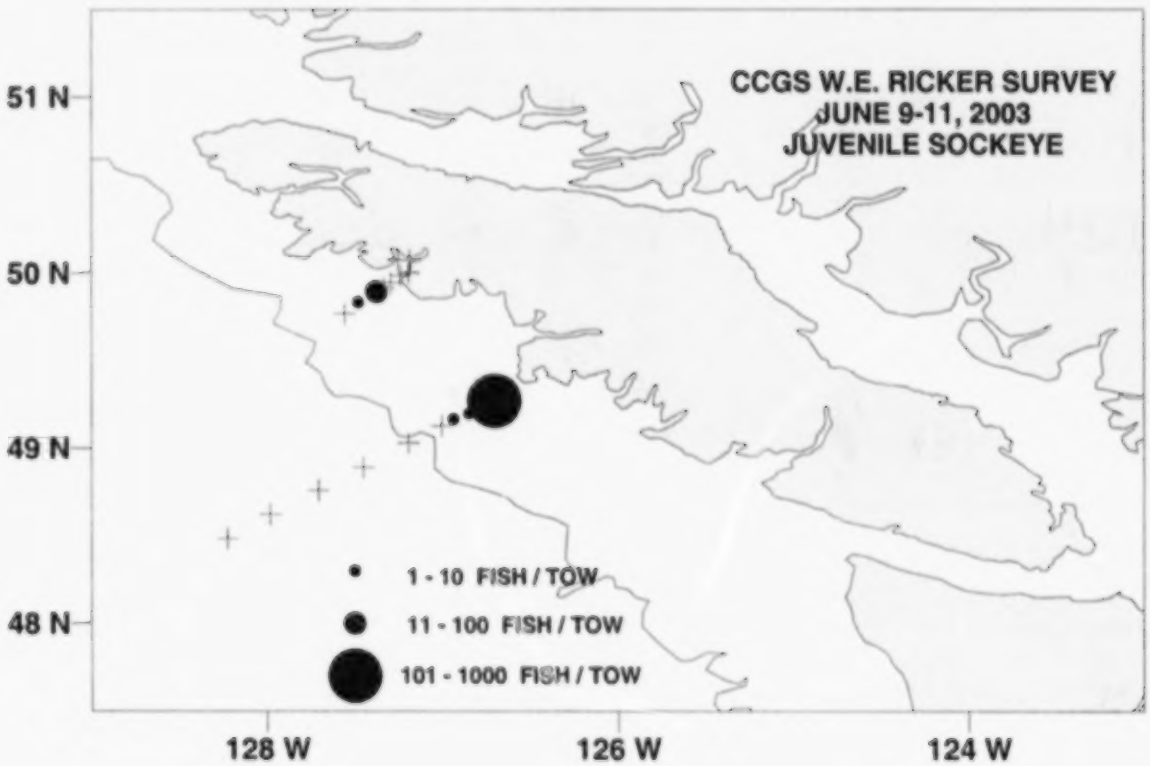

Figure 8. Distribution of juvenile (age X.0+) sockeye salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

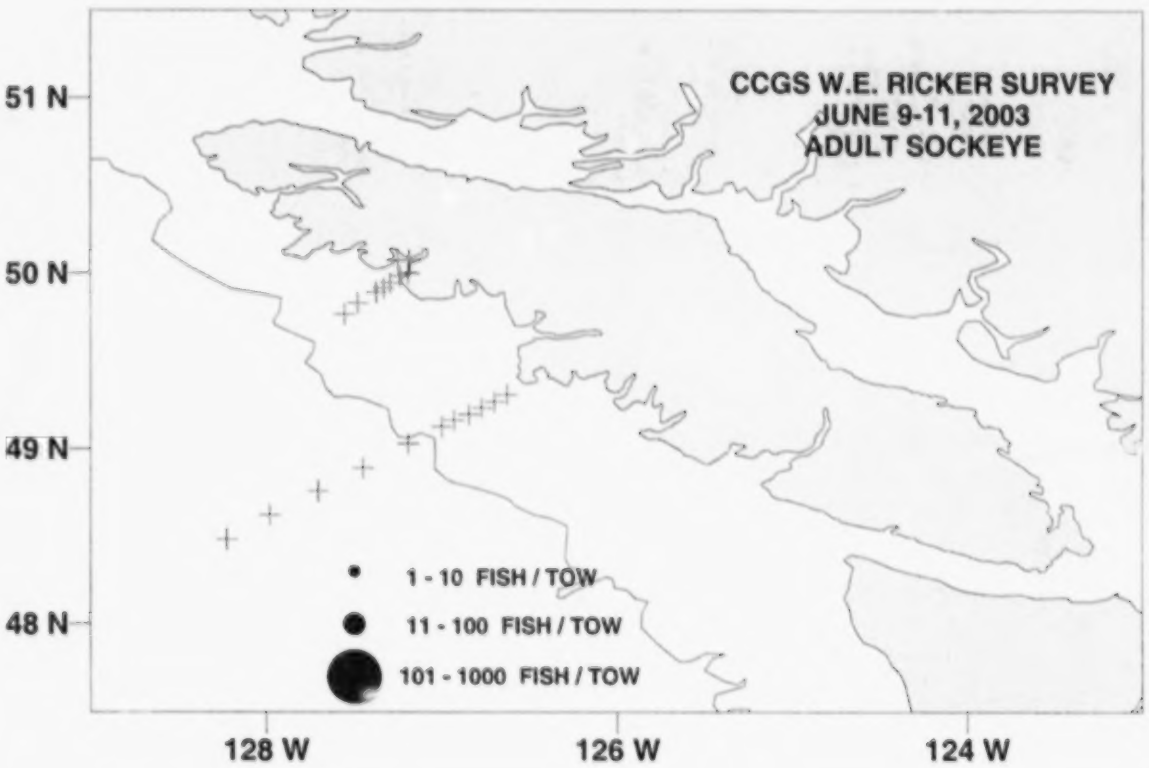

Figure 9. Distribution of adult sockeye salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

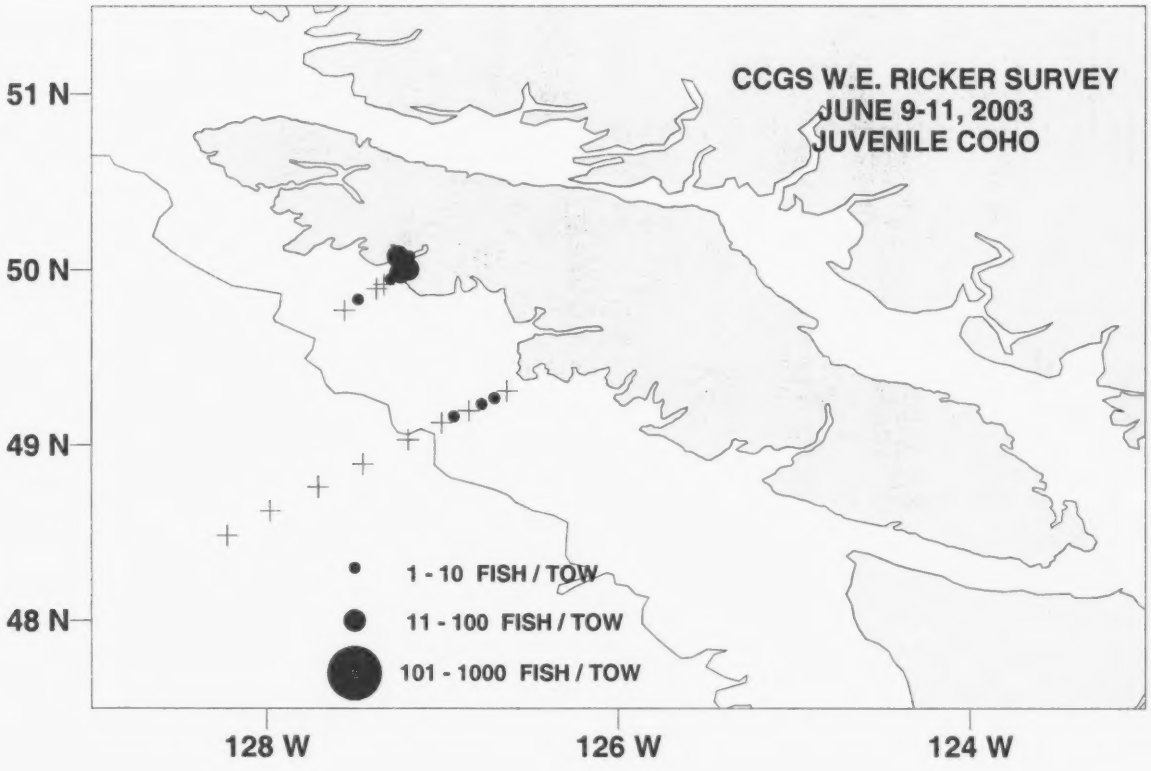

Figure 10. Distribution of juvenile (age X.0+) coho salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

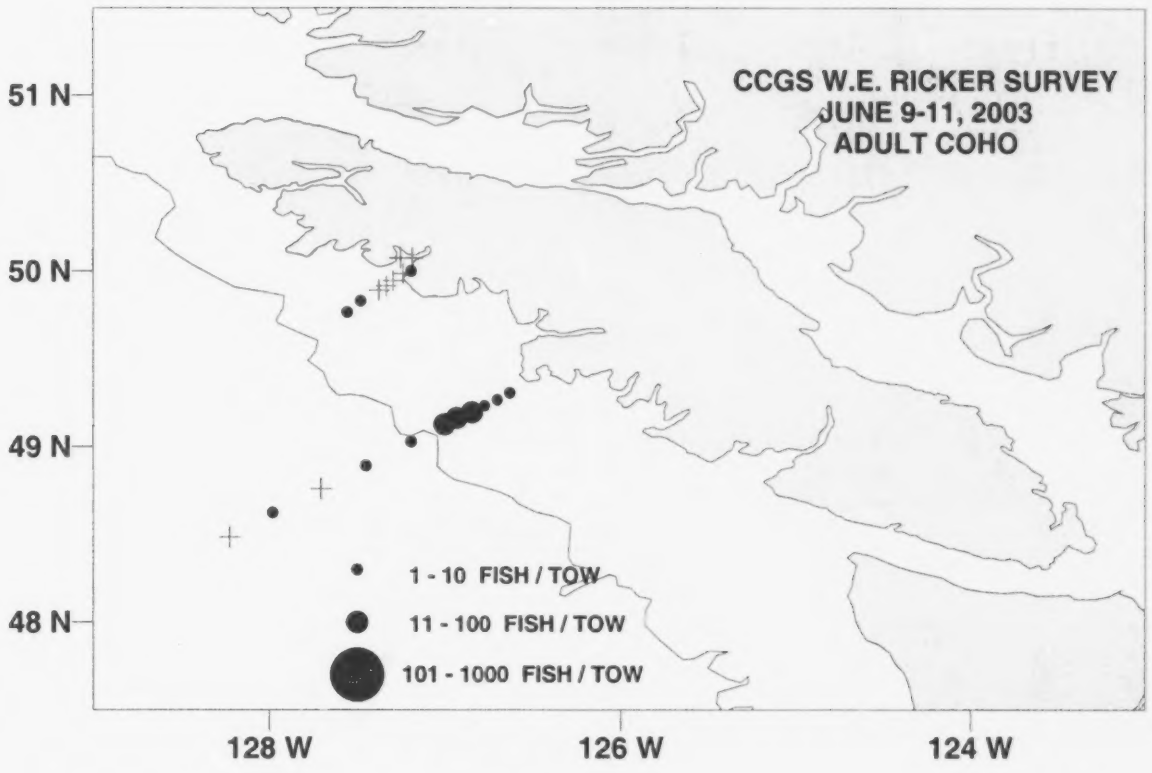

Figure 11. Distribution of adult coho (age X.1+) salmon catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

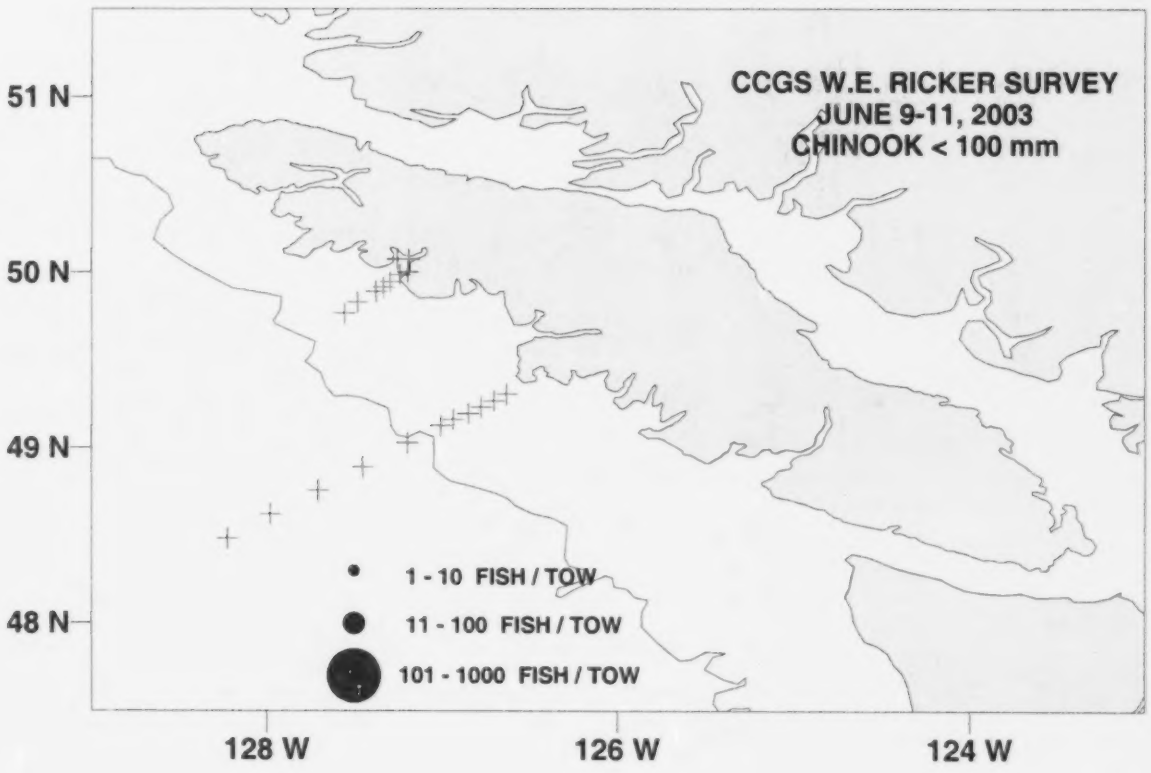

Figure 12. Distribution of catches of chinook salmon less than 100mm catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

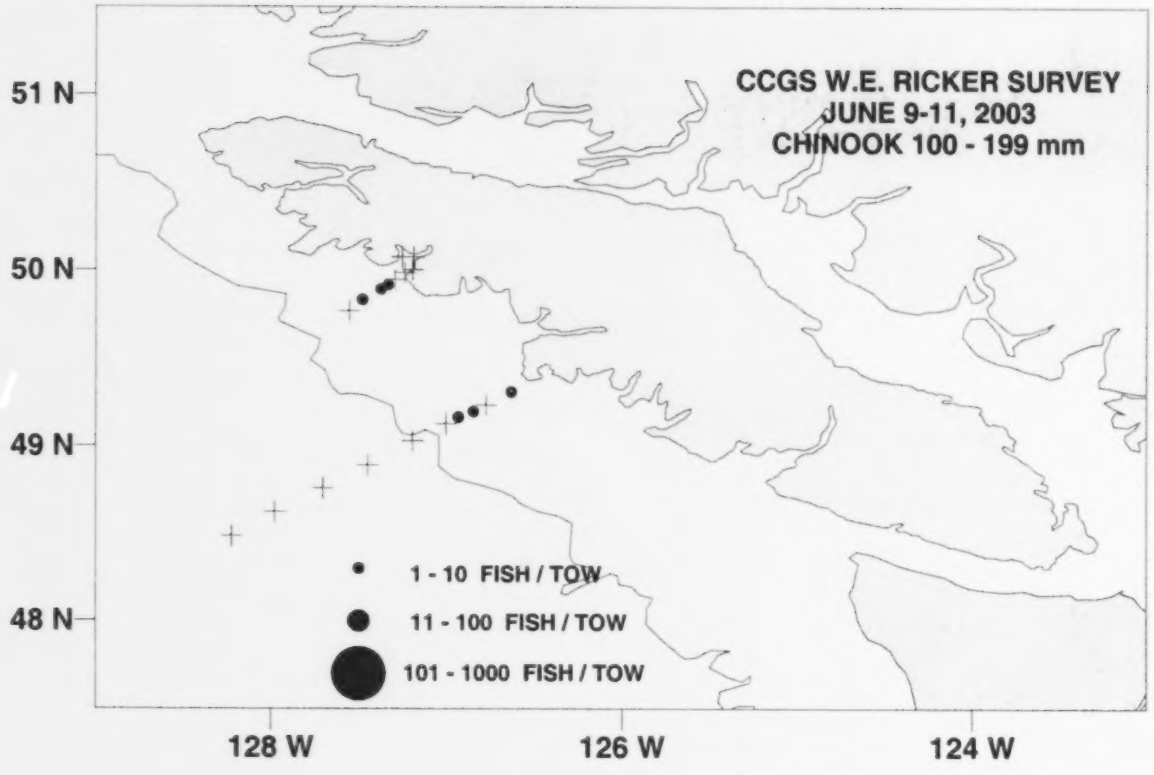

Figure 13. Distribution of catches of chinook salmon from 100 to 199mm catches. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

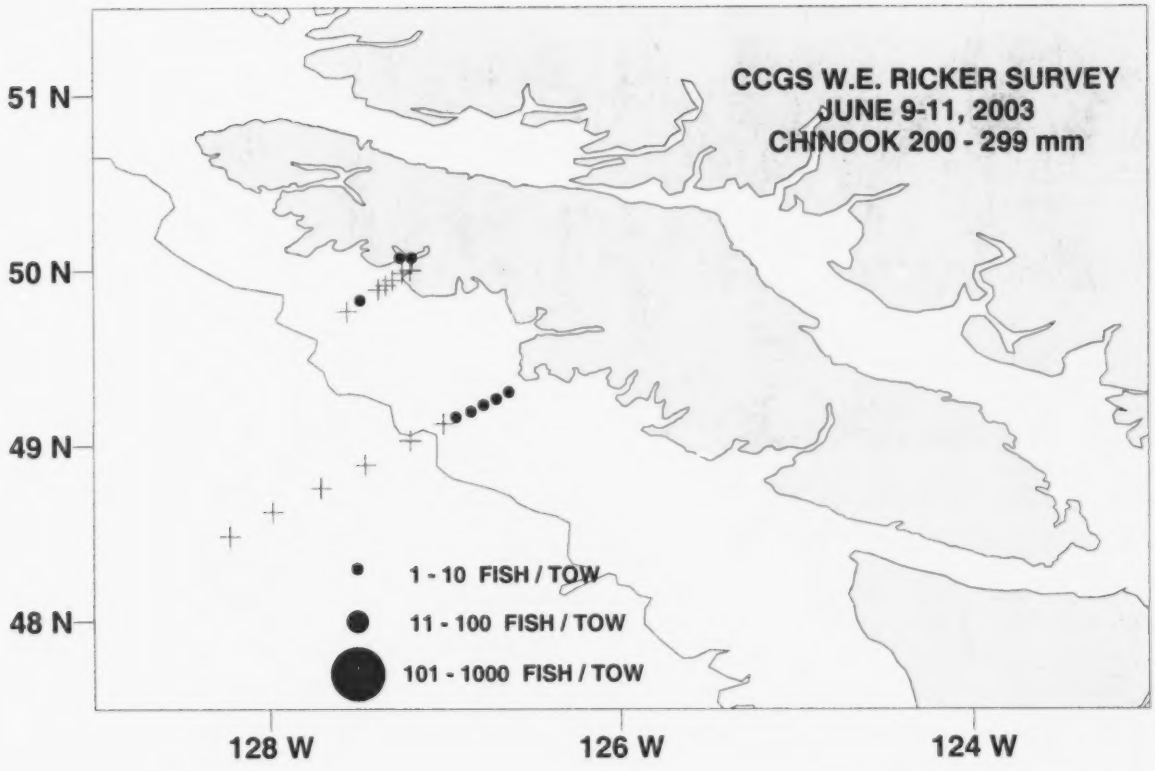

Figure 14. Distribution of catches of chinook salmon from 200 to 299mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

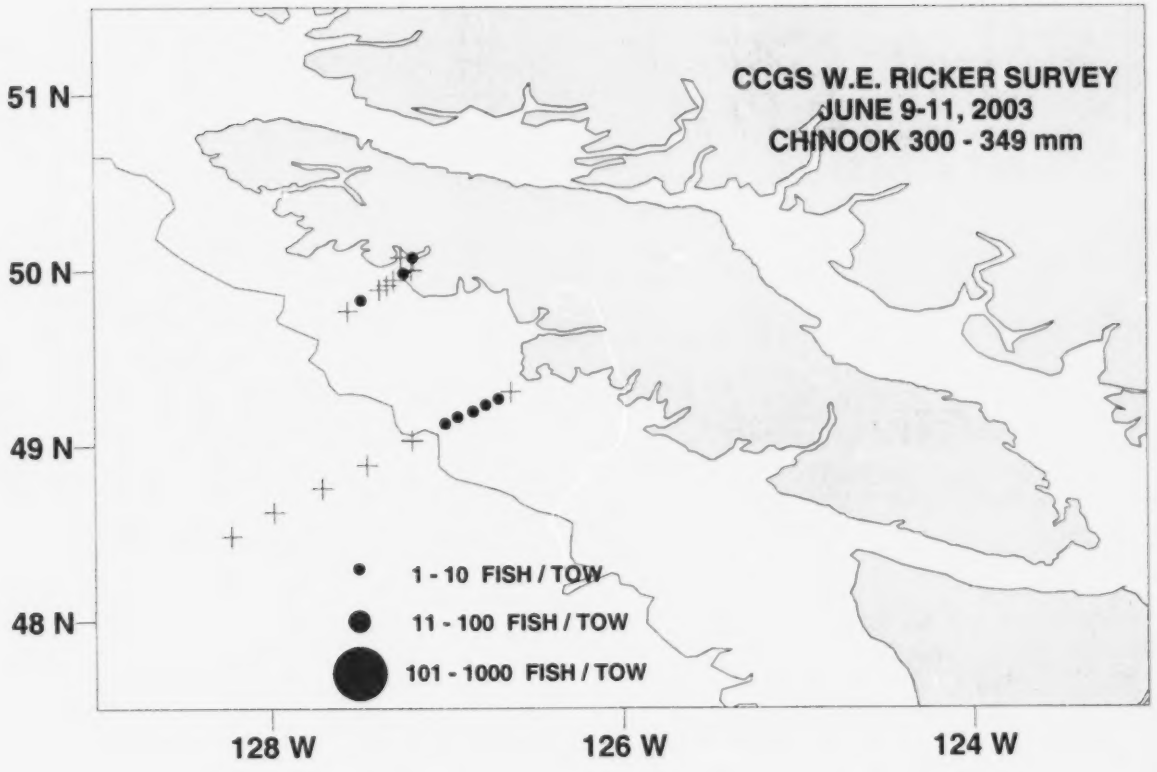

Figure 15. Distribution of catches of chinook salmon from 300 to 349mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

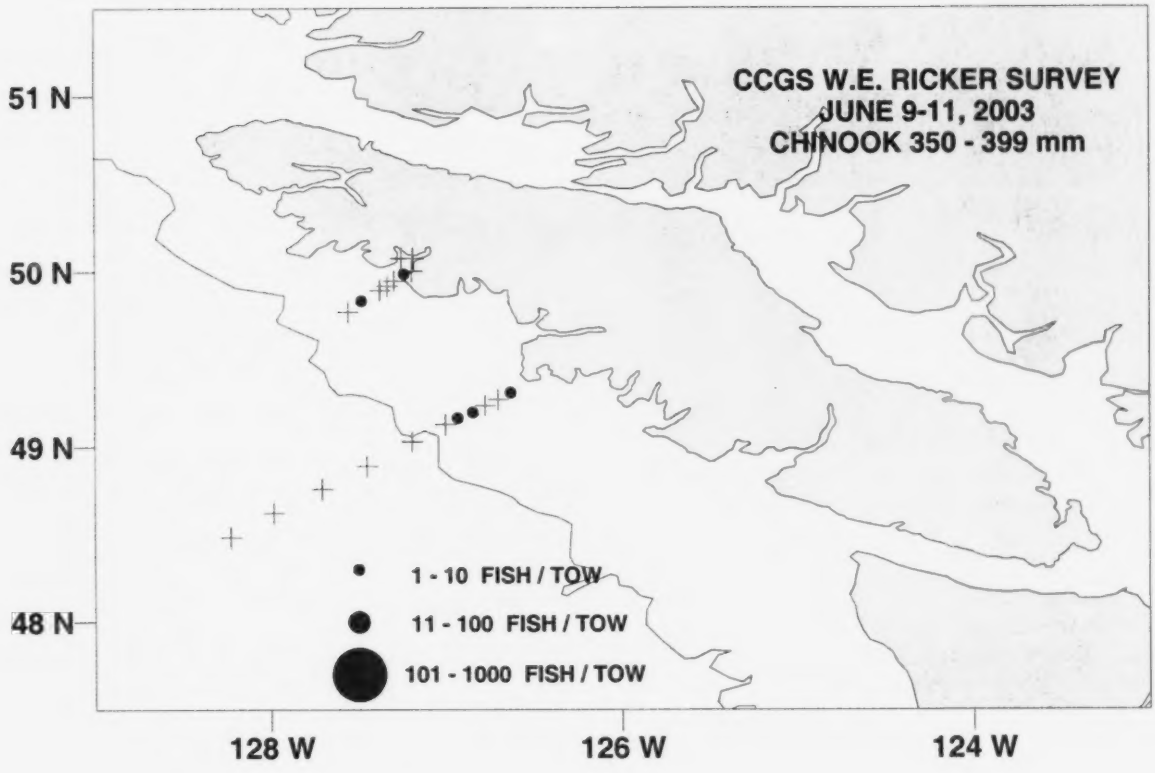

Figure 16. Distribution of catches of chinook salmon from 350 to 399mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

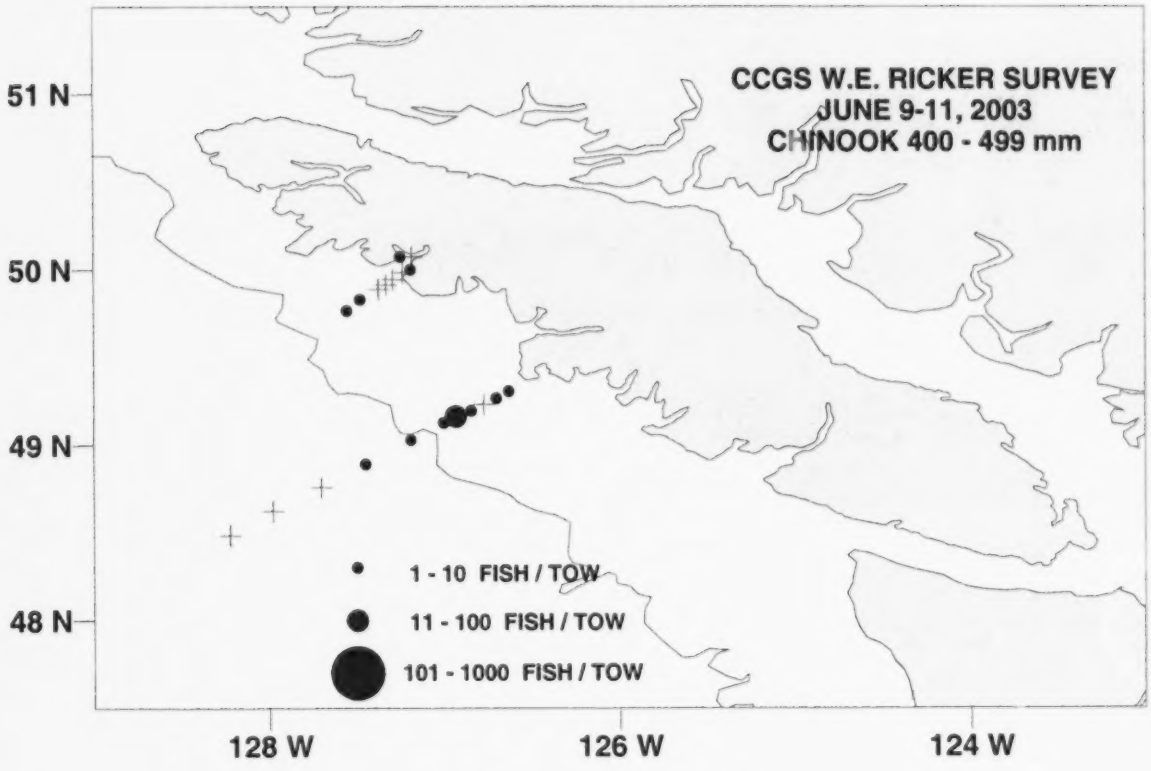

Figure 17. Distribution of catches of chinook salmon from 400 to 499mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

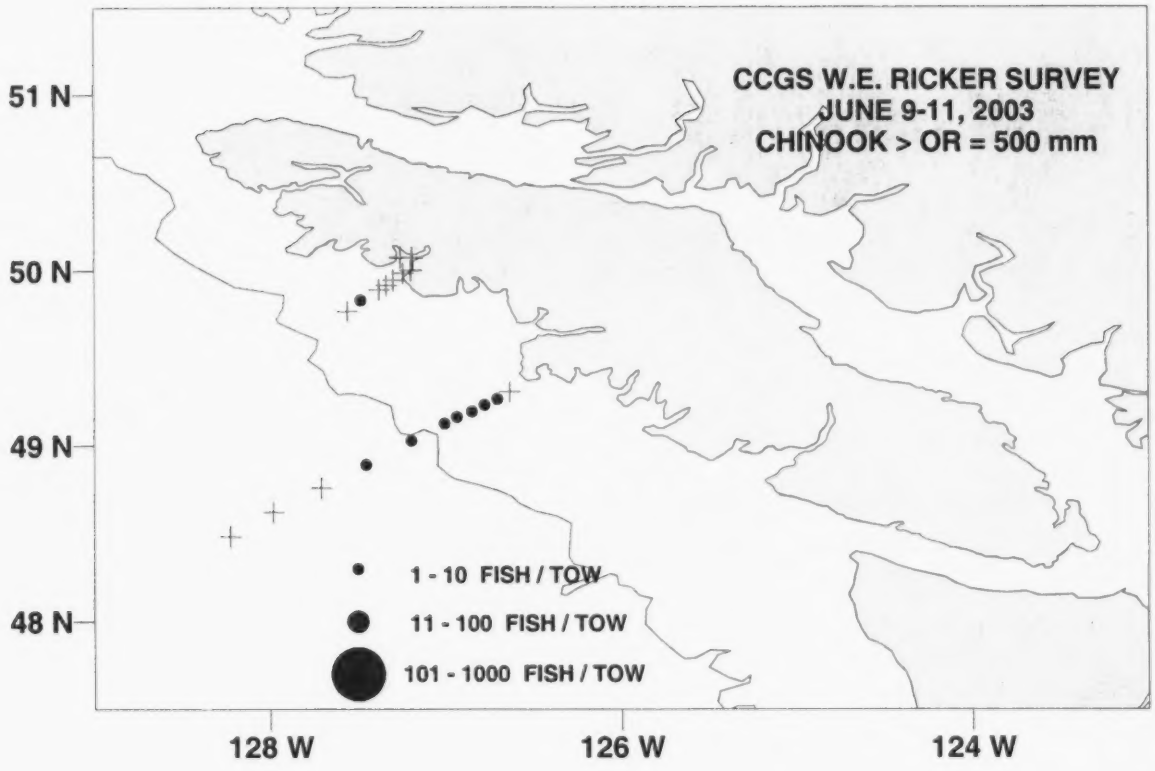

Figure 18. Distribution of catches of chinook salmon greater than or equal to 500mm. Symbol size (•) is proportional to catch per tow; zero catches are shown by a (+).

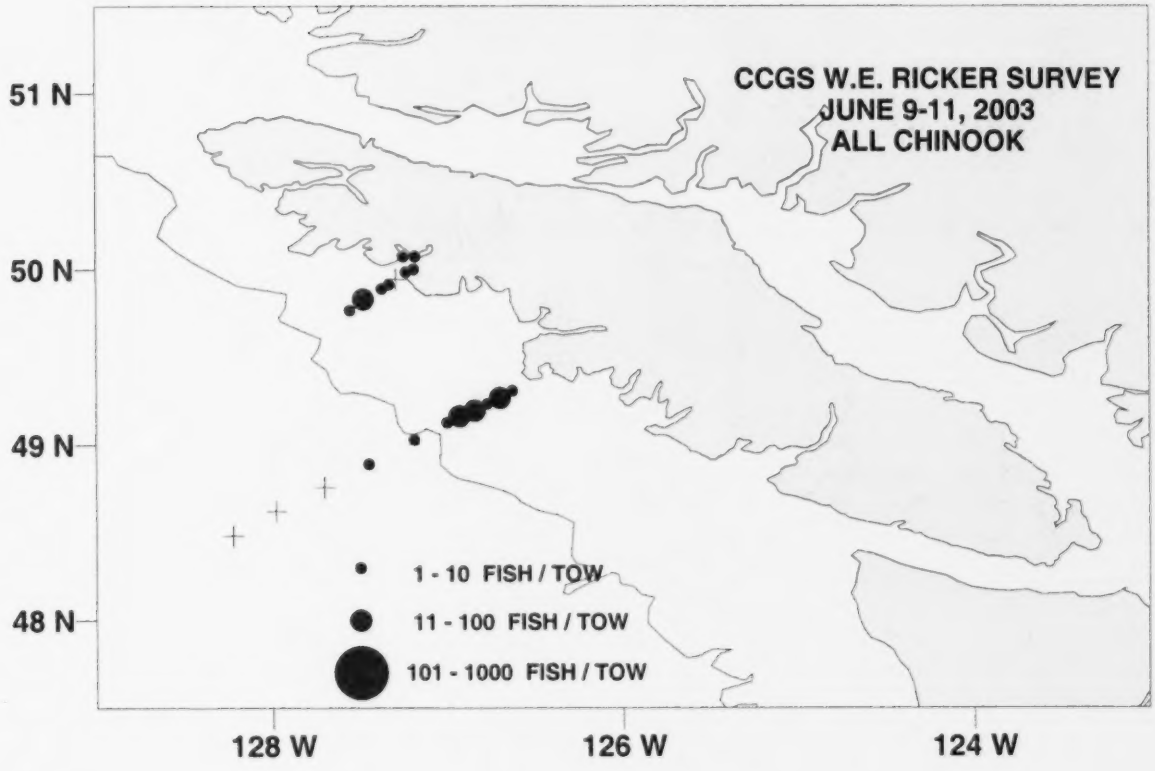

Figure 19. Distribution of catches of chinook salmon from all size classes. Symbol size (●) is proportional to catch per tow; zero catches are shown by a (+).

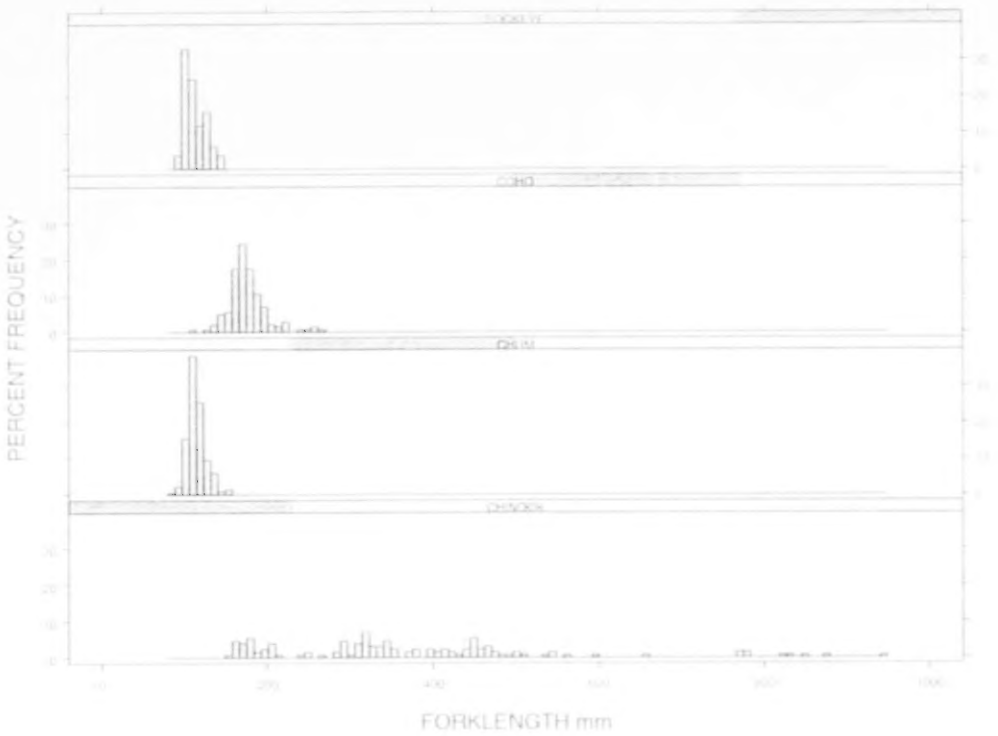

Figure 20. Size distribution (fork length; mm) of Pacific salmon caught on the CCGS W. E. Ricker survey to the Gulf of Alaska from June 9-11, 2003.

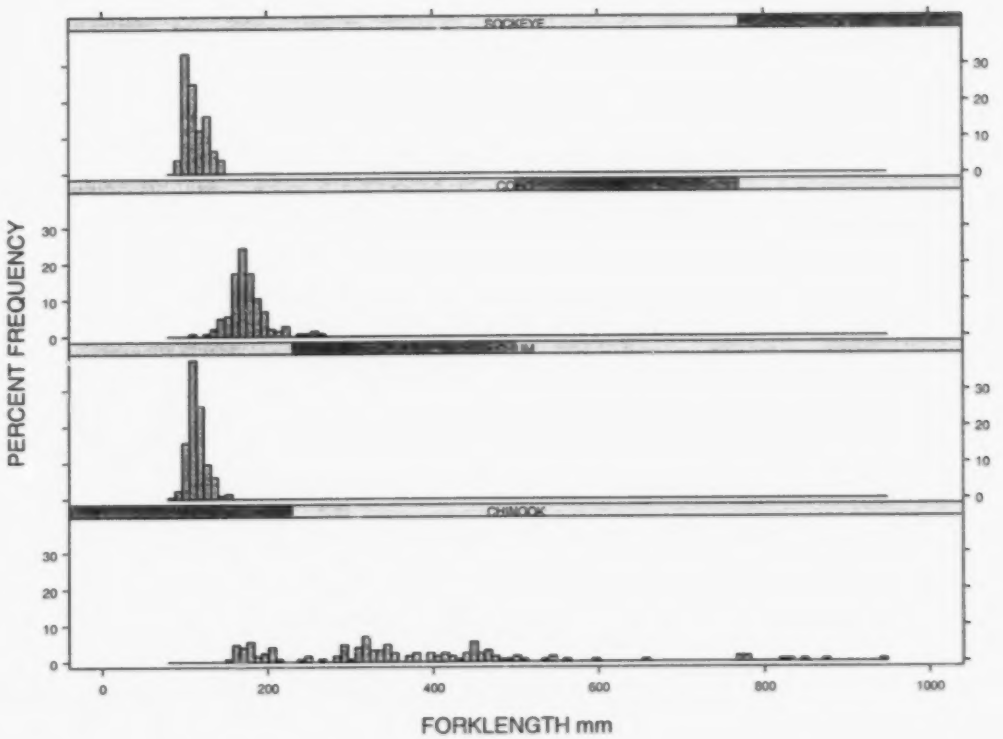

Figure 20. Size distribution (fork length; mm) of Pacific salmon caught on the CCGS W. E. Ricker survey to the Gulf of Alaska from June 9-11, 2003.